3 1761 06240343 1

SHOUT
SHARE
IT

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

http://www.archive.org/details/historyofscience10willuoft

THE SCIENCE OF HAPPINESS

BOOKS BY HENRY SMITH WILLIAMS

THE STORY OF NINETEENTH CENTURY SCIENCE. Harper & Bros., 1900.

"He must have a dull mind indeed who can read this book without fascination."—*Christian Register.*

THE HISTORY OF THE ART OF WRITING. (Four massive portfolios with 200 facsimiles in tone and color).

"One of the most superb examples of bookmaking in America since Audubon's masterpiece." —*Rupert Hughes* in the *Marconigram.*

THE HISTORIANS' HISTORY OF THE WORLD: A Comprehensive Narrative of the Rise and Development of Nations. (25 vols. with about 3,000 illustrations.) Edited with the collaboration of many specialists, European and American.

"A work of epoch-making importance comparable in scholarship and authority to *La Grande Encyclopédie*, the *Dictionary of National Biography*, the *New English Dictionary*, and the *Encyclopaedia Britannica.*"—*The Times*, London.

A HISTORY OF SCIENCE. (5 vols., fully illustrated.) Harper & Bros., 1904.

"At once a source of information and an inspiration."—*Prof. Louis G. Nolte.*

ALCOHOL: How it Affects the Individual, the Community, and the Race. The Century Co., 1909.

"By your clear and dispassionate presentation of this subject you have earned the respect and gratitude of a generation, and have done the good of an average life time."—*Letter to the Author.*

EVERY-DAY SCIENCE: A Record of the Evolution of Ideas, the Development of Ideals, and the Application of Organized Knowledge to the Needs of Practical Life. Profusely illustrated. The Goodhue Co., 1909.

For illustrated booklet describing the last named work write The Goodhue Co., 36 E. 23rd St., N. Y.

Vol. X

THE
SCIENCE OF HAPPINESS

BY

HENRY SMITH WILLIAMS, M.D., LL.D.

GOOD BOOKS WORTHILY GARBED

NEW YORK AND LONDON
THE GOODHUE COMPANY
PUBLISHERS ⁓ MDCCCCIX

308462
35
1
3

Q
125
W679
v.10

Copyright, 1909, by
HENRY SMITH WILLIAMS

All Rights Reserved

To

F. W. W.

VOTARY AND EXEMPLAR OF THE HIGH ART OF RIGHT-LIVING; MY LIFE-LONG ASSOCIATE AND GRACIOUS MONITOR IN THE PRACTICAL INVESTIGATION OF THE PROBLEM OF HAPPINESS

CONTENTS

PART I.—THE PROBLEM OF HAPPINESS AND ITS PHYSICAL ASPECTS.

PAGE
Chapter I.—The Problem of Happiness 3
Chapter II.—Physical Needs 19
Chapter III.—Sound Bodies 39
Chapter IV.—How to Sleep 59

PART II.—MENTAL ASPECTS OF THE PROBLEM OF HAPPINESS.

Chapter V.—How to See and Remember . . . 83
Chapter VI.—How to Think 101
Chapter VII.—The Will and The Way . . . 121
Chapter VIII.—Self Knowledge 133

PART III.—SOCIAL ASPECTS OF THE PROBLEM OF HAPPINESS.

Chapter IX.—How to Work 147
Chapter X.—Youth versus Age. 165
Chapter XI.—Gold Versus Ideals 183
Chapter XII.—Vocation Versus Avocation . . 193

PART IV.—MORAL ASPECTS OF THE PROBLEM OF HAPPINESS.

Chapter XIII.—Life Companionship 211
Chapter XIV.—The Coming Generation . . . 229
Chapter XV.—How to Invite Happiness . . . 241
Chapter XVI.—How to Die 255
Appendix 273
Index 329

THE SCIENCE OF HAPPINESS

Part I

THE PROBLEM OF HAPPINESS AND ITS PHYSICAL ASPECTS

"How singular is the thing called pleasure, and how curiously related to pain, which might be thought to be the opposite of it; for they never come to a man together, and yet he who pursues either of them is generally compelled to take the other. They are two, and yet they grow together out of one head or stem." —*Socrates* (*in Plato's Phædo*).

Chapter I

THE PROBLEM OF HAPPINESS

"A man's happiness—to do the things proper to man."
—*Marcus Aurelius.*

"Were a man to order his life by the rules of true reason, a frugal subsistence joined to a contented mind would be for him great riches." —*Lucretius.*

I

THE PROBLEM OF HAPPINESS

THE problem of happiness is the problem of problems. The problem of problems did I say? Nay, I understate the case—the *only* problem is the problem of happiness. For savage and for civilised man alike; for hod-carrier and for psychologist; for the little child prattling at its mother's knee and for the old man tottering to the grave; for blooming maiden and for ancient beldame; for beast and bird and reptile even; for each and every living thing in all the broad expanse of land and sea and sky, —the ever present, ever insistent, inexorable problem of happiness is the dominant motive of every act.

Back of every conscious movement lies the loadstone of a desire. Back of every instinctive motion of the lowliest organism, every reflex twitch of a muscle of beast or of man, is a chain of organic impulses leading no less surely, though it be by the tortuous route of heredity, to a primeval desire. And in the last analysis all desires, whatever their seeming diversity of character, may be reduced to one: Stated broadly, there is no desire but the desire for happiness.

Sometimes the association of motive with result is direct and evident; sometimes it is remote and obscure, but always it is present and always operative. The wolf pursuing its quarry; the child grasping eagerly after a toy; the youth pressing his ardent suit as a lover;

the man pursuing the ideal of his ambition—these are obviously seekers of pleasure. But no less truly, if less directly and therefore less obviously, seekers of pleasure are the mother sacrificing herself for her child, the patriot risking his life for his country, the devotee voluntarily suffering martyrdom.

These illustrations suggest that the paths of pleasure may be curiously devious. Indeed to casual inspection it would seem that, if the great purpose of organic being is the pursuit of happiness, then the great result of organic being is pitiful failure. Every organic thing is born to suffer and to die. The vast multitudes of carnivorous creatures that make up so large a bulk of the world's population sustain life only through the infliction of suffering and death. One animal preys on another; man preys on his fellow man; disease lurks around every corner and perpetually inflicts its quota of misery; and, back of it all, that none, not even one, may escape, stands the dreadful spectre, Death, to lead his never ending galaxy of blanched victims—inexorably, pitilessly—through the closing portals of this world. To talk of happiness in such a world of strife and terror and torturing agony seems but a mockery.

But softly. "There is purpose in pain, otherwise 'twere devilish." The moralist has long believed it, the biologist can now explain it. And that purpose is—strange paradox!—to make pleasure possible. But for pain there could be no such thing as pleasure; but for suffering there could be no happiness.

It needs no obscure metaphysical reasoning to explain this paradox. We need but reflect on the dangers to which every living thing is subjected to realize that the creature without nerves would meet with incessant injuries, which it would never learn to avoid, because it would often be unaware of their existence until too late. The nerveless child would never learn to dread the fire; it would play with flame and ember as with any other toy, to its ultimate undoing.

Reasoning from analogy, the psychologist assures us that the same thing is true of the mental and moral worlds. Had there not been disagreeable obstacles to overcome, painful experiences by which to be taught and stimulated, the mind of man would never have developed beyond the stage of mere passive sentience. Again the moralist will assure us that without a personal knowledge of misery and sorrow, man could never have developed the broad spirit of altruistic pity that so largely determines the possibilities of civilization.

We need have no quarrel with all this reasoning of biologist, psychologist, and humanitarian. We need not for a moment dispute their logic. But just as little need we doubt that—however necessary such experiences may be for the race—the chief hope for the individual is to evade the harder side of life so far as he may. Few men or women are better workers in the world because they suffer from physical illness or misfortune. However happy your environment enough physical pain will come to you, enough sorrow will invade your household, to develop those altruistic impulses that thousands of generations have implanted in every mind. Exceptional cases aside, you will be a far better citizen if you are physically, mentally, and morally healthy, than you can hope to be if ill in body and perpetually harassed in mind and spirit.

All personal considerations aside, then, it is your duty to humanity to cultivate soundness and strength of body and of mind. In other words, it is your duty to seek personal happiness, if for no other reason, because by so doing you will on the whole make for the happiness of others,—will add to the sum total of human pleasure.

It must be understood that the word "happiness" as here employed, has two phases—the active and the passive phase. In the natural order of things even the happiest being does not pass all its existence in a delirium of joy. Indeed it is a law of mentality that the most intense pleasures are the most transient. Satiety is the safeguard against over-indulgence. The hours of intense joy are relatively few, even if all were aggregated for a lifetime.

The main course of life must lie at best along a plateau, with here and there a mountain peak. If we escape in fair measure the sloughs and valleys of despond and misery, this is all that can be hoped—nay, all that is to be desired. Hence, at best, a large part of our share of happiness is of the passive character. To be "happy in that we are not unhappy" is a very real form of pleasure. The mere cessation of pain seems cause for supreme joy to one who has experienced long periods of suffering.

The goal at which the rational being aims, then, is the goal of greatest average freedom from pain of mind and body; of greatest average preponderance of the sense of well being; and therefore of greatest capacity for usefulness in adding to the welfare of humanity.

Four great parallel highways lead toward this all-encompassing goal—the highway of the physical senses, the highway of the intellect, the highway of social intercourse, and the highway of moral aspirations. The man has attained most happiness who has travelled as far as his hereditary limitations will permit on each of these paths.

Considered in this light it is evident that the pursuit of happiness differs as widely as may be from the mere effort to secure sensual pleasure. Such an effort, considered as a sole aim in life, would be grasping after Dead Sea fruit that must surely turn to ashes. Nay worse, the goddess of pleasure, thus courted, has a face as baleful as a Gorgon's, turning the very soul of her wooer to stone.

The pursuit of happiness, then, is not an endeavor that may be left to unguided instinct. Indeed, nowhere else in the entire field of human action—which after all scarcely exceeds the bounds of the present subject—could there be greater need of counsel, better opportunity for advice, fairer field for the application of that organized knowledge which we term science. Yet in our modern world the subject is treated with singular reticence. We are still not quite emerged from the cloud of that medieval philosophy which deplored worldly pleasure as positively reprehensible, focusing all its aspirations on the hoped-for pleasures of a future life. Hence, while all the world makes the pursuit of happiness a prime object, there still persists a tendency to look askance at the avowed pleasure-seeker.

No better illustration of this could be asked than the interpretation that has been put in modern times upon the more candid philosophies of the old Greeks. There lived back at the beginning of the third century B.C., a wise and pure philosopher named Epicurus, who practised, so far as we can learn, a somewhat ascetic method of life as regards bodily pleasures. He gathered about him in his famous Gardens, a school of disciples, and taught them so wisely and so well that it was claimed throughout antiquity that no man or woman—for the school had female votaries—that once entered the ranks ever became an apostate.

One of his maxims was this: "Irresistible power and great wealth may up to a certain point give us security, so far as men are concerned; but the security of men in general depends upon the tranquillity of their souls and their freedom from ambition."

Again he says: "The just man is the freest of all men from disquietude, but the unjust man is a perpetual prey to it."

Yet again: "Of all the things which wisdom provides for the happiness of a whole life, by far the most important is the acquisition of friendship."

As the founder of the school was dying of a painful and lingering illness, he sought consolation amidst his sufferings, so it is testified, in musing on the happy hours that he had spent in reasoning on the questions of philosophy. He had striven to know in full measure the joys of living, but it had been his explicit avowal that "we cannot live pleasantly without living prudently and honorably and justly; for virtues are connote with living agreeably, and living agreeably is inseparable from the virtues."

Yet by a cruel, though not unusual, perversion of the verdicts of history, the name of this philosopher has come to be a synonym for the pursuit of sensual pleasures. The word "epicure" and its allies in all the modern languages of Europe, connotes a peculiar regard for the pleasures of the palate. Yet it is on record that Epicurus himself and his immediate followers lived habitually on the most abstemious diet, the staples of which were water and barley bread. Wine was the habitual drink of the Greeks of that day, and was so little a luxury that ten gallons cost about the equivalent of six cents; yet the disciples of Epicurus considered a few ounces a day a sufficiency of this universal beverage. To their contemporaries, their moderation must have seemed actual asceticism. And as to luxurious foods, it is recorded that Epicurus himself, writing to a friend, said, "Send me a Cytherean cheese, that if I wish to have a feast I may have the means." Scarcely an epicurean banquet that, in the modern sense.

Such misjudgment as this has more than once been the penalty of frankness. An ever critical world seizes upon the most tangible feature of a half understood philosophy, and, stubborn as always in its verdicts, refuses to render justice. So epicureanism has been looked at askance. Yet, according to a truer analysis, the philosophy of Epicurus differed not a jot in its motives from every other philosophy. All philosophical systems seek the road to happiness. If some modern philosophers deplore the ideals of epicureanism, it is not the actual ideal, but a false conception of that ideal, which they deprecate.

In this new age of science, it would seem that the time had come to put aside something of the dogmatic prudery of the Middle Ages, freely acknowledging that the old Greek had keen insight when he declared that, rightly considered, pleasure is, in the last analysis, the only good; and urging that such acknowledgment goes hand in hand with the fullest aims of idealism in the mental, the social, and the moral worlds.

Let us learn to realize that a healthful exercise of all normal bodily functions is in the highest degree moral. What makes for bodily health makes also for spiritual health—and a healthy organism would seem to be the great specific ideal of Nature. Bodily health will make for clearer thinking, a better appreciation and practise of justice toward our fellow men, a kindlier philosophy of living—all of them steps toward the goal of happiness. Therefore, a well-rounded personality, physical, mental, social, and moral, is the enviable personality.

Consider for a moment how woefully most of us fall short of this ideal, even as to the most elementary functions:

It is a daily paradox that most of us never learn to perform the commonest bodily functions even approximately as well as we might. We take air into our lungs about 25,000 times each day of our lives, yet comparatively few persons ever learn to breathe to best advantage, using all sets of respiratory muscles, and changing the air frequently in all the air sacs even to the very tips of their lungs. Yet we know that the penalty of our slovenly breathing is very likely to be consumption. The tubercle bacilli find lodgment in the stagnant air passages, and are allowed to develop unmolested, where proper breathing might often throw them out or enable the tissues to resist them.

Eating is another perennial function. But how few people ever learn when to eat, what to eat, and how much to eat for their own advantage. The great tendency here is to overindulgence. It may be questioned whether one person in a hundred eats only as much food as he needs, to say nothing of the digestible quality of the food taken. Yet every indigestible particle of food taken into the stomach, and every particle of any kind in excess of what is needed insures just so much unnecessary wear and tear on the organism. The penalty may or may not be manifest in a local dyspepsia, but in either case there is sure to be a telling effect on the system as a whole.

The highest function of all, as manifested in consciousness, is incessantly operative during all our waking hours. We may momentarily stop breathing; for much longer periods we may abstain from eating; but while we are awake we cannot even for an instant stop thinking, and there is reason to believe that even when we sleep the same mental processes, modified only in degree, continue in operation.

Yet how many minds come to be the "cold clear logic engines" that Huxley says human minds should be? How many persons have fairly good habits of thinking even within the range of their ordinary capacity?

Thackeray tells us somewhere that his mind was always active in some definite direction. Whether he walked or sat or what not, though he might seem to be musing, he was never musing aimlessly. Some definite problem was always before his mind's eye. At the end of an hour or a day he could tell what he had been thinking of during that hour or that day. How many people can say as much?

Emerson, we are told, went daily to walk in the woods, rambling aimlessly, or taking physical leisure in whatever way for the moment pleased him. But he never liked to return till he had garnered some definite new thought, much as some other wanderer might pluck a flower. He too loved the flowers and the birds and trees and all of Nature; but he beheld them all with the mental vision rather than the physical; they were parts of a plan, each one co-ordinate with all the rest. They gave a penumbral setting to his thoughts, and out of this setting there shone at last, brighter by contrast, a new idea.

How many people, even of intellectual power, have ever discovered such a star of first magnitude as that? How many have their old ideas so clearly understood and definitely classified that they could be sure to recognise a new idea as such if they should chance upon one? How many have any ideas at all or any pronounced opinions that are not founded in a fetich? Yet time out of mind man has boasted that he is the one thinking animal.

We know that the prizes for clear thinking are multiform; that they include, in fact, almost all the good and desirable things in the world. We know that the penalty for slovenly thinking is mental mediocrity, lack of scholarship, failure in all that is best in life. Yet we live on in a perpetual mental twilight, never acquiring the habits of thinking that could dissipate the haze and give us a clear perspective. In moments of enthusiasm, fitful and infrequent, we rise toward the light, only to settle back anon into the mists of vague, ambiguous, unfruitful reverie. At night we sleep and assume that our minds are inactive, yet for the most part, the record of the night is scarcely more a blank when morning comes than is the mental record of the day that preceded it. We assume that we are awake and mentally active during the day; but where is the record of the day's thoughts? In truth, we were not so wide awake as we supposed. Thoreau's cynical comment that he had never seen a man who was more than half awake, is justified in our own experience.

Yet Thoreau was the friend of Emerson and Hawthorne and Lowell and the rest of the brilliant New England coterie. Were they too only half awake? If so, there would seem but little hope for the ordinary mortal.

Still it is always worth while to do one's best. The comparative degree of thinking is not to be scorned, even if the superlative is plainly out of reach. Despite the maxim, practise does not, and perhaps cannot make perfect, but it can surely do something toward it, and any change from that positive degree of vagueness in which most minds rest cannot but be an improvement.

It is a hopeful sign that the world is awakening to an appreciation of the interdependence of mind and body. Our generation has seen a tremendous revival of the old Greek interest in athletics. The muscular system, so generally neglected fifty years ago, now comes in for a fair share of attention in our educational curricula. It is said that ten million youth and men in America alone are receiving some regular athletic training. The fact is tremendously, immeasurably important. It offers a practical lesson in the application of the science of happiness on a grand scale. But after all it is only a beginning. We must learn to keep up physical athletics throughout life and not merely during college days; and we must pursue the ideal of mental and moral gymnastics with equal assiduity. Then we shall see—not the millennium, but a truly wonderful generation of men and women.

Summarising briefly now the ideas just suggested —anything beyond mere suggestion being obviously impossible here—it is clear that the science of happiness connotes no necromantic phrase that will be an open sesame. There is no royal road to happiness any more than to learning. Indeed this follows as a matter of course, since the road to happiness runs along the highway of knowledge. The science of happiness must connote a vast variety of details of information.

No science nowadays is simple; the day of occult formulas, of specifics, of magic words is past. We travel in electric cars, to be sure, but we know nothing of the potency of an Aladdin's lamp.

Our science must be based in part on the laws of the physiologist. Accepting the dictum that good health is the surest road to normal mentality, it must inculcate rules for eating, for training the body, and for sleeping.

It must inculcate also the fundamental rules of the psychologist, teaching the best methods of training the memory, the thinking power, the will.

It must include data gathered by the practical sociologist, showing how the needs of the many should be paramount to the desires of the individual, and giving convincing evidence that individual happiness finds full fruition only through the development of broad sympathies and altruistic impulses.

Stated otherwise, the science of happiness must comprehend a broad system of rules for such training of body and mind as will lead to the best practise of the art of living,—doctrines of a self-confidence that stops short of self-illusion; of sentiment without sentimentality; of cheerful optimism not run riot into visionary fanaticism;—in a word, of sanity and common sense.

When the generality of mankind have grasped the essentials of such a comprehensive science, human life as a whole will approach nearer to the ideal condition which obtained among the immediate disciples of Epicurus, whose famous Gardens, according to a modern German commentator, were "a nursery of fair conduct, of finest morals, and of noble enjoyment."

Epicurus himself declared that he who would well enough consider his precepts would "never be disturbed by either sleeping or waking fancies," but might "live like a god among men."

In our skeptical age, we dare not hope for so easy a road nor so sure a goal. Yet in this same skeptical age, wonders have been achieved. Space and time have been rendered in a sense subject to man's will through the service of steam and electricity; plagues and famines have been all but banished from the earth; preventive medicine grapples with disease as never before, while surgery robs physical injuries of many of their former terrors; and in the moral field, enlightened sentiment assures a larger measure of justice between man and man and between nation and nation —a nearer approach to the ideal of moral equality— than was ever known in any previous generation.

The advance of scientific knowledge has thus raised the average level of human happiness higher and higher. It remains for each individual to apply the rules of right living that are within his reach. By so doing, each may attain a large measure of that freedom of body and spirit, that mingling of self-reliance and communal helpfulness, which the old Greek characterized as godlike, and which we of a generation that knows not the attributes of the gods, may perhaps most fitly describe as Ideally Human.

Chapter II

PHYSICAL NEEDS

"If you have so far mastered your appetite as to have brought your body to coarse fare and to be well contented with mere necessaries, do not glory in your abstemious way of living. If you drink nothing but water, proclaim not your own sobriety on every occasion. If you inure yourself to hardship, do it for your own benefit, and not to attract the admiration of the people. Let vainglorious fools make their trials as public as they can; but know that all affectations of this kind are utterly unworthy of a philosopher." —*Epictetus.*

"The man of understanding will be far from yielding to brutal or irrational pleasures,—but he will be always desirous of preserving the harmony of the body for the sake of the concord of the soul." —*Plato.*

"Different food is pleasant and nutritious for different creatures; that which to some is nauseous and bitter, may yet to others seem passing sweet; and the discrepancy is so great that what to one man is food, to another is rank poison."
—*Lucretius.*

II

PHYSICAL NEEDS

TURNING now from generals to particulars, let us first consider an aspect of the problem of happiness that has to do with a properly nourished body. How close the association is, no one need be reminded. It is within the experience of everyone that hunger is not consistent with mental satisfaction; and that an ill-digested dinner may disturb the equanimity of the most amiable mind. We shall do well, then, to inquire at some length into the principles of right living as applied to the taking of food.

The general question of what to eat may be settled for most healthy individuals on very simple common-sense principles. Individual peculiarities aside, you are justified in accepting the testimony of experience, in default of other argument, as sufficient warrant for eating all varieties of food that by common consent have been voted wholesome. With this common-sense induction, the researches of the physiological chemists are in full accord. So are the observations of practical hygienists and physicians. Dr. Austin Flint (he of the elder generation) long ago declared that he had never known a person to become a faddist regarding diet without also becoming a dyspeptic. Most medical men of experience will applaud this verdict.

This of course does not apply to the individual who avoids certain foods because he has found that they disagree with him. "What is one man's food is another man's poison" is a half-truth that applies here and there with surprising force to individual idiosyncrasies. I know a woman, for example, who cannot taste a strawberry without being literally poisoned. Even the small quantity used as a flavor—say for ice cream—has a characteristic and deleterious effect.

But such exceptional cases as this only emphasize the rule that, generally speaking, what is wholesome for one healthy individual is wholesome for another. Were it otherwise, our entire social world would be sadly awry.

Therefore, in specific answer to the query, What shall I eat? it suffices to say, as a general proposition: "Eat whatever the generality of people about you regard as wholesome food; avoiding, however, anything against which your own experience has warned you unequivocally." Moreover, you will do well not to be too easily persuaded that any particular article of diet does not agree with you. A large number of people—particularly faddists who have injured their digestive organs by following dietary rules—deny themselves food of this, that, or the other kind through a mistaken notion that it does not "agree" with them. Perhaps they have taken it at some time when anything would have disagreed; or in excessive quantity. It is worth while to make very sure before you deny yourself what may really be a useful and pleasant article of food on the ground of personal idiosyncrasy. Such idiosyncrasies, I repeat, do exist, but they are much less common than one would suppose were one to listen to the whims of every hypochondriac.

A somewhat similar argument applies to the disuse of certain foods on the ground of distaste for them. Such distaste may result from some unpleasant experience due to eating the food in excess, or to having had it prescribed as an article of exclusive diet during a prolonged illness. An aversion to milk, for example, is often due to the latter cause. But such a distaste may usually be overcome by a little persistent effort, and, in the case of any important class of foods, the effort is worth the making, in the interest of a varied diet. To yield to the aversion may result in cutting off from your regular regimen an article of food that is essential to a well-rounded dietary; to say nothing of the practical convenience of being able to eat the things that are set before you on your own table or that of a friend. And the latter reason alone is sufficient to make it worth while to train every child to eat all manner of common foods. It really is not very difficult in most cases to do so, and the child will have abundant cause to thank you in after years for the trouble.

The recommendation of a varied diet, however, is not to be carried to the extent of counselling absolute indiscrimination. On the contrary, rational application of the modern knowledge of food-stuffs may very beneficially supplement the general knowledge that is revealed in the average food customs of our time. For example, you will do well to vary your diet to meet the requirements of your particular mode of life. If your employment is sedentary, and you take little exercise, so that the muscular (nitrogenous) tissue of your body is relatively little subject to wear and tear, you will obviously need less nitrogenous food than would be required by your neighbor whose calling is more active.

Now the nitrogenous foods are meats, eggs, milk, cheese, and leguminous vegetables. Undoubtedly you may eat too much of these, particularly if you have acquired a taste for them during a period of activity. Your diet remaining unchanged, after you have adopted a sedentary manner of life, your system may be clogged, as it were, with refuse nitrogenous products, with effects equivalent to a mild poisoning.

A very large number of Americans, particularly in the cities, suffer from this cause. They eat meat, for example, in considerable quantities, two or even three times a day, while taking practically no exercise at all; whereas even an athlete in training may very well get along with meat once a day. Undoubtedly the effect, particularly in persons past middle life, is detrimental; not infrequently this habit contributes directly to the causation of such diseases as gout and rheumatism, and to affections of the kidneys.

I trust that no one will construe this as an argument against a meat diet as such. It is intended merely to call attention to the dangers of over much cf one kind of food element, which is essential to the bodily needs, to be sure, but which may be taken in excess. And, indeed, precisely the same manner of caution may be urged against excessive use of other of the food elements. The carbohydrates, for example, as represented by starches and sugars, are taken in excess by a very large number of persons. So true is this, that an inordinate fondness for candies, and for rich cakes, pastries, and "preserves" might be said to be almost a national American vice. The habit of eating candy between meals—even though the candy in itself be entirely wholesome—is almost sure to lead to a cloyed appetite, through which the varied diet of the regular meal will be neglected.

If, on the other hand, candy is eaten after the regular meal, the body is thereby supplied with an excess of fuel that it does not need; with the result that an unnecessary strain is put upon the digestive and assimilative apparatus. Either this apparatus suffers in consequence, and the food is badly assimilated, or the excess of carbonaceous matter is stored away as fatty tissue, to the detriment of the individual's health, comfort, and æsthetic appearance.

The same line of reasoning applies, obviously, to rich pastries and desserts taken in excessive quantity after a meal that has already supplied all the nourishment that the body requires. Persons prone to obesity will do well to omit this course altogether, or to substitute cheese and fruits after the manner of the Latin races; and the same rule might wisely be followed by whoever has eaten heartily of starchy vegetables before the dessert appears. The great danger of this rich dessert course at the end of a meal, is that it usually adds superfluous fat-forming material to a supply already more than ample.

Its merit, on the other hand, is the sheer sensuous pleasure that it affords the palate. Most Americans find it hard to convince themselves that they have dined satisfactorily when this course is lacking. They pine for it when in foreign lands, and very commonly teach their European cooks to make desserts that at least bear some resemblance to the pies, puddings, and sundry creamy concoctions of their native heath. To deprive them of these "sweets,"—as the British vocabulary styles them,—would be to inflict a virtual punishment. To inveigh against that highest product of culinary art, the New England pie, seems next door to an assault upon the Constitution.

Far be it from me to disturb the slumbers of my seven generations of New England ancestors by such blasphemy. Let us by all means honor the pie and its cousins-german; but let us reflect that no one can do full justice to these crowning gastronomic gifts who approaches them with an appetite already sated. A certain reserve in dealing with the earlier courses of the dinner will insure the dessert a better-merited reception from both palate and digestive system.

But, this, after all, amounts to nothing more than the counselling of moderation in eating as a general principle. Rest assured, however, that there is no principle more in need of exploitation. Theognis assures us, speaking for his contemporaries of old Greece, that "Satiety has killed far more than famine"; a familiar Latin proverb declares, in like vein, that "Gluttony kills more than the sword"; and the voice of the modern physiologist gives us warning that in this regard times are not greatly changed in this latter day.

The varied delicacies that load the modern table furnish temptations to overeating that few palates can or do resist. In particular the American custom of providing everything in lavish quantity and serving several kinds of food at a course, makes for the vice of overeating. The Latin races, regarding eating in the light of an important social custom, prolong the meal to lengths that the hurried American often thinks interminable; yet in the end, since each course consists of only a nibble at a single viand, they have partaken of only a moderate quantity of food, which the digestive organs are far better able to care for than if it had been thrust upon them more hurriedly. This difference of custom is doubtless at least partly responsible for the relative prevalence among Americans of digestive disorders on the one hand and obesity on the other.

As to the time for eating. The customs of all races of civilized men seem virtually agreed as to the wholesomeness of taking food three times daily. Continental peoples, to be sure, seem to make light of breakfast; yet the *cafe au lait* with rolls and butter of the Frenchman and the thick chocolate of the Spaniard have adequate food value, even though simpler in preparation than the eggs, bacon, and toast of the Englishman and the steak or chops and potatoes of many Americans. And it is a familiar observation that many Americans after living abroad come to prefer the simpler breakfast. Others adapt themselves to one custom or the other with the facility that characterises a formative race, seeming to forget the existence of eggs and bacon overnight when they cross the Channel from England; and reverting to steak, potatoes, and griddle cakes as a matter of course when they sit down to their first breakfast on the homeward-bound steamer.

It were futile to inquire which custom is intrinsically best, since each nation seems to thrive on its own. Doubtless the differing customs are linked with differences of climatic conditions and of racial temperament. Much depends, too, upon the hour at which breakfast is taken; something more upon the character of the forenoon occupation; and most of all perhaps upon the nature of the mid-day meal that is to follow. As to the latter point, there is a very marked difference of custom. Germans, for example, almost invariably eat their heartiest meal in the middle of the day; while the French as habitually dine in the evening. National peculiarities aside, it may be said that mid-day dining is a custom of the country, whereas the city dweller dines after his day's work is done. The differences of habit as regards character of work, time of sleeping, and the like, that give rise to this diversity, are obvious; and the manner in which the human system adapts itself to one custom or the other, thriving under either regimen, is no less striking. Almost the only dogmaticism that the observed facts seem to warrant, is the assertion that the growing child may with advantage take its heartiest meal in the middle of the day.

A word of caution may, however, be given as to disturbing the regularity of habit. If you dine habitually at night, it is a very questionable procedure indeed to change to a mid-day dinner on Sunday and on holidays, as many people do. Still worse is it, perhaps, if you dine regularly say at mid-day, to postpone dinner on these recurring holidays till two or three hours past the accustomed time. The digestive system, when in proper running order, is wonderfully clock-like in its operations, and to disturb the regularity of its activities once in seven days is not conducive to health or happiness.

Regarding this entire phase of our subject, I must needs confine myself to mere hints; but I must not neglect to call attention to two great universal food supplies that might readily be overlooked because of their very universality. I mean, of course, water and air. So largely are the bodily tissues dependent upon the watery solvent that makes up their main bulk, and so rapidly is the supply exhausted, that the organism cannot maintain life beyond four or five days at most, if totally deprived of this all-important food; and the demand for a renewal of the oxygen supplied by the lungs is even more insistent, since here the period of deprivation consistent with the continuance of life is to be measured by minutes, or even by seconds. Meantime life may be preserved for several weeks without the ingestion of any other foods than these.

Notwithstanding the obvious dietetic importance of water and of oxygen-supplying air, however, nothing is more common than the over-abstemious use of the former and the neglect to secure an adequate and pure supply of the latter. In particular, persons that suffer from rheumatic and neuralgic disorders are very generally found to have almost an aversion to water as a beverage. In treating these and numerous other affections, physicians have occasion to prescribe the free drinking of water as an adjunct to or a substitute for drugs. Often they send their patients to the famous watering-places merely because water to flush out the system will there be taken as it would not be taken at home. Even in acute illnesses, they find the free imbibition of water an aid that may take precedence over drugs; and to persons in health who would remain well, no counsel is oftener or more wisely given than the injunction to drink water freely.

The curative value of pure air has long been known, but is perhaps more fully appreciated by the physicians of the present generation than ever before. Popular attention has been directed toward the subject in recent years by the striking results of open-air treatment of consumption. Wide publicity has been given also, very recently, to the fact that even acute diseases, such as pneumonia, may be treated to great advantage in the open air.

Meantime the need of an adequate air supply for the organism in health has been brought to public attention through discussions as to the ventilation of school buildings, theatres, and the like. Yet the full importance of the subject is certainly not appreciated by the average cultivated person of to-day; as witness, for example, the fact that few individuals consider the question of ventilation at all when purchasing or building private dwellings for their own habitation. No small proportion of the inhabitants of Europe and America, even of the cultivated classes, sleep habitually in rooms with closed windows,—rooms so closely approximating hermetic sealing that the air inevitably becomes positively noxious before morning.

Having thus deliberately set about poisoning themselves, they marvel at the natural sequence of events, in accordance with which they sleep poorly, are disturbed by dreams, and awake stupefied rather than refreshed.

Even during the waking hours, a large number of people secure a less adequate supply of oxygen than they might supply their tissues had they learned to practise better methods of breathing. Under ordinary conditions, breathing is, to be sure, an involuntary function. In response to the insistent demands of the tissues, the lungs are inflated, without conscious direction from the brain, sufficiently to secure at least a minimum quantity of oxygen. But persons of sedentary habits do well to supplement this reflex activity by giving conscious attention from time to time to the manner of their breathing.

It you will now and again go to an open door or window and, standing erect with shoulders thrown back, practise forced breathing to the fullest capacity of your lungs for a minute or two, you will directly benefit every tissue of your body, and will tend to develop improved habits of involuntary breathing.

To women in particular this practise is to be commended, partly because they as a class are more given to sedentary habits of life, but partly also because the extraordinary fashioning of female attire tends to place women at a disadvantage as regards the securing of an adequate air-supply. In saying this I would not be understood as viewing with fanatical eye the subject of corsetting. I am thoroughly aware that a vast number of women maintain a fair measure of health and attain a good old age notwithstanding they have kept their lungs constricted by moderate lacing every day of their lives.

In this as in so many other instances, the organism proves itself marvelously adaptive and wondrously resistent to abusive treatment.

Yet no one who understands the physiological rôle of oxygen can doubt that to restrict the air-supply is to aim a blow at the proper activities of all the tissues and organs of the body; and it does seem rather a pity that the sex which is striving so valiantly and in many ways so successfully to demonstrate its intellectual fitness for high tasks, should stubbornly refuse to let common sense guide it to the removal of so obvious a physiological obstacle.

It is gratifying, on the other hand, to recall that the physiology of breathing is now taught pretty generally in our elementary schools, so that the average youth of fourteen knows more about the subject than the wisest physician could know in the days of our grandparents. Doubtless the universal diffusion of information on this all-important subject will in due course have an appreciable effect upon the health and happiness of the average members of our race.

In the meantime any individual who so chooses may further his own interests by paying heed to his own method of breathing, and by challenging the quality of the air-supply which his habitual manner of living provides.

An intelligent attention to the subject may very likely ward off actual disease, and will surely add to your personal comfort, to your sense of well-being, to your working efficiency, and to your capacity for enjoyment.

It remains to speak of certain commodities which are not foods in the proper sense of the word, yet which are akin to food-stuffs, and which play a most important rôle in relation to the needs of the physical organism. I mean, of course, these universal solacers of overwrought nerves and perverted appetites, tea, coffee, alcholic beverages, and tobacco. Alcohol is, to be sure, a food of the carbohydrate family, but it does not owe its popularity to its food value, and would quickly fall into disrepute were that alone considered. In common with the others, it is taken for its effects on palate and nerves, not because of its power to repair or build up tissues. Tea and coffee are mild nerve stimulants, and tobacco contains an essential principle, nicotine, that is one of the most virulent of poisons.

Tobacco, as everyone knows, is a contribution of the Western hemisphere, and hence was unknown to European civilization till the sixteenth century. Tea and coffee were equally unknown to classical antiquity. But alcoholic beverages have been known and loved of men since the dawning of civilization.

Doubtless alcohol has caused more misery—has detracted more from the sum of human happiness—than has any other commodity or combination of commodities. When one considers how this enticing drug has held mankind in thraldom generation after generation, claiming as victims some of the brightest minds and most noble characters; when one reflects how it undermines the physical constitution, dethrones reason, perverts morals, breaks up families, and threatens the stability of races;—when one reflects on these things even in their most patent bearings, one finds it difficult to speak with sane moderation of a drug so all-potent for evil, even as it is difficult to use the drug itself in moderation.

Yet sane criticism demands recognition of the fact that vast numbers of people in every generation have been able to use alcohol habitually without ever using it to obvious excess, and without ever becoming its slaves in the ordinary acceptance of the word. All the Mediterranean races of antiquity were habitual wine-drinkers, as are the Latin races of to-day. Doubtless the Greeks and Romans believed, as do the Italians, Spaniards, and French of to-day, that the use of wine as an habitual table beverage adds to the well being of mankind. A dinner without wine would be to them a repast deprived of its atmosphere of contentment and geniality.

I have neither space nor inclination to discuss here the effects upon a race of such habitual and general use of an alcoholic beverage; and I desire to avoid mere dogmatic assertions regarding a subject of great complexity. Nevertheless I venture to state my personal opinion, based on a careful consideration of the subject from many points of view, that this habitual use of wine, particularly during childhood and adolescence, has been the prime factor in stunting the size of the Latin races. It goes without saying that I conceive undesirable mental and moral developments to have coincided with the physical degeneration thus implied.

Be this as it may, our present concern is with the individual rather than with the races. And assuredly one hazards nothing in counselling the average individual to give alcohol in every form a wide berth. It may be admitted, as general principle, that the self-control that makes temperate indulgence possible is admirable. But the very fact that total abstinence is for most people easier than temperate indulgence speaks volumes; and the wise individual may well ask himself why he should tamper at all with a temptation that may lead to his total undoing, and that can by no chance add to his well-being.

Even the taking of a glass of claret at dinner, which seems a mild form of indulgence, is based on an illusive principle. It is supposed either to aid in digesting a larger quantity of food than could otherwise be ingested with comfort; or to stimulate the mind to more than normal activity. In the one case, it aids in the formation of a deleterious habit of overeating; in the other it stimulates to abnormal activities from which the mind must react disadvantageously. The healthy digestive system and the healthy mind need no such artificial prodding.

In somewhat modified degree, the same remarks might be applied to tea and coffee; though of course these solacers differ from alcohol in that their abuse does not lead to such depths of disaster;—albeit their effects on the system are more harmful than are sometimes supposed. Tobacco occupies an intermediate position: its effects are more pronounced than those of tea or coffee, and less pronounced than those of alcohol. Its poisonous principle is one to which the system must be gradually accustomed before it can be taken with even apparent impunity. On the system not thus partly immunized, even a small quantity of nicotine acts as a virulent poison.

Yet of course it is a matter of every-day knowledge that hundreds of thousands of individuals use tobacco habitually and live to a green old age, seemingly none the worse for the habit. Nor should we forget the large modicum of pleasure that is to be credited to the weed. Nevertheless, I venture to predict that ten out of twelve of your friends who use tobacco will admit, if you question them, that they believe they would be better off without it. Most of them will admit that on occasion they have "sworn off,"—only to begin again under stress of the old temptation. No one of them, I think, will assert that tobacco benefits his physical system.

In a word, then, most users of tobacco must admit themselves virtually slaves to a habit which they regard as deleterious. Most smokers prefer that their sons should not smoke, and keep tobacco from them as long as they can;—a fact which in itself constitutes a serious indictment of the weed. Yet so imitative is human nature that precept and warning are mostly thrown away, and we see the youth of each succeeding generation following the example rather than the admonitions of their elders.

Nevertheless I venture one other suggestion. Everyone is aware that athletes, when training for a great physical contest—football, rowing, boxing, or what not—are usually obliged to abstain altogether from tea, coffee, alcohol, and tobacco. It seems an easy inference that it would be the part of wisdom for anyone who would keep himself in the best physical condition to abstain from these drugs at all times. This is counselling too much asceticism, you say? Well, that depends. Enough foodstuffs remain, it would seem, to satisfy any reasonable appetite. Of course if you take the Byronic motto: "I will dig the mine of my youth to the last vein of the ore, and then—good night! I have lived, and it is enough":—if you take this motto, I say, no such argument as this can appeal to you. But if you prefer to make bid for a longer, saner, and happier life, the thought is worth consideration.

But in judging the probable effects of such admonition as this, we must reflect that the large majority of users of these drugs can scarcely be said to follow their own wills in the matter. They obey the mandates of that most powerful of autocrats, Habit, and the course over which he drives them is an inclined plane which becomes steeper as they advance. It is only at the beginning that most men could turn back if they so desired. Some men do indeed remain masters of their own physical desires to the end, but they are the rare and admirable exceptions. And even such self-mastery consists essentially of a perennial capacity to substitute good habits for bad ones. Indeed the entire regulation of our physical needs is largely brought about through the struggle to establish favorable habits as against disadvantageous ones. In proportion as the victory is won, does the organism gain a machine-like capacity to work to best advantage and to make the most of its opportunities.

But you do not wish to be a mere machine, you say? Ah, but your wishes have nothing to do with the matter. That was decided for you ages before you were born. Your body is a machine, subject to well-known physical and chemical laws; and your mind depends for its operations—for its very being—on the operations of this body.

You have no choice as to that.

Your only choice is as to whether you will make your body a well-regulated, carefully tended machine, or whether you will allow it to fall into a state of slovenly disrepair; whether you will be the director of your habits, or their feeble slave. Stated thus there can be no question as to what should be your answer; surely there is no question as to which line of action will tend to make for greater happiness.

Chapter III

SOUND BODIES

"Do nothing unknowingly, but be taught what is requisite; and thus you will pass life the most pleasantly. Nor is it meet for you to have no care for the health of the body; but to make to yourself a moderation in drink and food and exercise; and I call that moderation which will give no pain." —*From the "Golden Words" of Pythagoras.*

"There is a great difference between one who is learned and one who is not, and between one who has been trained in gymnastic exercises and one who has not been. Now the rulers [of the Ideal State], male and female, should see to these things; the women superintending the nursing and amusements of the children, and the men superintending their education, that all of them, boys and girls alike, may be sound, hand and foot, and may not spoil the gift of nature by bad habits, in so far as this can be avoided." —*Plato.*

III

SOUND BODIES

THERE is still another aspect of physical well-being that demands attention from whoever would invite health, with its attendant prospect of happiness. It is not enough that the body should be well nourished and free from the taint of vicious habits of indulgence; it is requisite also, in this age of sedentary occupations, that direct attention should be given to the needs of the muscular system. The generality of the men and women for whom these pages are written are engaged in occupations that require mental rather than physical effort; and it is safe to say that a large proportion of them have muscular systems that are in a state of greater or less disrepair.

The basis for this predication is found in the simplest of physiological facts,—the fact namely that the muscular system of man, like that of every other animal, is so constituted that it develops if used and degenerates if not used. A muscle that lies quiescent becomes flabby and ill-nourished; ultimately it degenerates and shrinks in size. But let the muscle contract from time to time, which is the only thing that any muscle can do directly, and it grows, thrives, and becomes strong and healthy, provided, of course, that other conditions are favorable. But these simple physiological facts would be of no great significance in the present connection were it not for the further fact that all the various organs of the human body are linked together and in some degree mutually dependent. Thus the muscles, though their direct and primary function is to contract, have a scarcely less important secondary function in their influence over the other organs. This influence is exerted through two patent channels, the blood-vessels and the nerves.

Every muscular contraction, besides tending to produce a movement of some portion of the body, compresses the veins in and about the substance of the muscle, and accelerates the flow of blood in these vessels. Muscular contraction is therefore, within reasonable limits, a direct aid to the heart in keeping up the circulation of the blood. And since every organ of the body (including, of course, the brain) depends absolutely upon its blood-supply for its power of vital activity, the indirect influence of the muscles, exerted through the blood-vessels over every other organ of the body, is of vast importance.

The influence exerted through the nerves is not quite so tangible, but even more important. The muscle cell and the brain cell are like poles of a battery, a nerve being the connecting wire. Vital impulses travel back and forth over this nerve, and the integrity of these impulses is dependent upon the integrity of the cells at either end, as well as upon the integrity of the nerve itself. Let the nerve be severed, and both muscle cell and brain cell will in part lose their function, and tend to suffer degeneration. Under ordinary conditions the muscle can contract only when an impulse from the nervous system tells it to contract. The impulse which the muscle cell sends back stimulates the brain cell to perform its function. If either cell is injured, the other degenerates.

That is to say, the injury or destruction of a muscle of any individual's body—let us say the amputation of an arm—brings about an actual degeneration of cells within the brain of that individual. His central nervous system is crippled as well as his muscular system, and this not merely in an imaginary way, but actually and demonstrably. One might even go a step further, still keeping within the bounds of truth, and say that, indirectly, every other organ of the body also suffers to some extent, since it is not merely brain cell and muscle cell that are linked in mutual dependence, but, directly or indirectly, every pair of cells in the entire body.

Now since a less degree of injury than actual destruction will necessarily result in proportionate reciprocal weakening, it follows that the health of the brain and of every other organ is in some measure linked with and dependent upon the health of the muscular system. The person who desires physical health can therefore do no better than to seek the aid of his muscles in securing it. And in doing this he need, in fact, can, do nothing more than permit his muscles to secure exercise through performance of their natural function of contraction.

But the power of the muscles as health-preservers extends beyond mere physical well-being. We have seen that the muscles exert a direct influence over the brain. Now we know that the brain is the organ of the mind. The brain may not "secrete thought as the liver secretes bile," as some of the cruder old-time philosophers phrased it, but physical action of the cells of the brain is essential to the production of conscious mind, however the metaphysicians may strive to evade that fact. Whatever the rationale of the link that binds brain and mind, the link exists. A healthy brain has its counterpart in a healthy mind, and a diseased brain will produce—I use the word advisedly—a diseased mind. Therefore, since an altogether healthy brain can exist only in an altogether healthy body the integrity of the mind is indirectly but very vitally dependent upon the integrity of every cell of the body.

And that is another way of saying that in a very practical and vital sense every organ of the body is a mind organ, hence that everything that tends to promote the health of the remotest cell of the body tends also to promote the mental health of the individual of whose body that cell is a part.

It follows, as an irrefutable corollary, that no mind can attain the greatest development of which it is potentially capable unless the body that it animates undergoes a corresponding development. I do not mean to say that a powerful mind may not reside in a frail body. Such a statement would be palpably absurd. Both minds and bodies have their hereditary limitations. I *do* mean to say that the powerful mind in the frail body would be yet more powerful—capable of more sustained efforts, and so of greater ultimate achievements—if the body, even though inherently frail, were brought to its fullest physiological development.

In this view—which is the true view—there is no rivalry between the gymnasium and the library. The professor of gymnastics is the direct ally of the professor of philosophy. The swinging of dumbbells (I cite this because it is about the most inane form of physical exercise) is an intellectual performance. The young man who appears to be bent only on grappling a football is in reality helping himself to prepare his Greek lesson. The budding athlete as he measures his biceps and notes a fraction of an inch of increase is really measuring his mind also. That may seem a very far-fetched illustration, but, considering mental potentialities of course rather than actual achievements, it is literally true. The motto of the Turnvereins—"A sound mind in a sound body"—in its widest implications, is most amply sustained by the facts of physiology and psychology.

It is because our people as a whole are beginning to realize the implications of these physiological facts that there has come the marvellous wave of interest in athletics. Some centuries since, the invention of gunpowder seemed to take the premium off physical strength. With advancing civilization mental strength became the *sine qua non.* But now it appears that the two must go together; that the mind of man, despite its rationality, is earth-born and earth-bound, and cannot safely spurn the body it inhabits.

Primitive peoples, indeed, are little disposed to do so.

They develop the body perforce. War and the chase, the making of implements, tilling the soil, in short, their every-day avocations, keep them in constant training. And the same is largely true of the residents of rural districts in civilized communities. The farmer need not be told to exercise his body. He has hardly leisure from physical exercise to develop his mind.

But we are living in the age of cities. Year by year the population of the civilized world masses itself into larger and larger communities, and lives on an average a more and more sedentary life, as regards vocations that bring a livelihood. Meantime the struggle for existence, though becoming harder and harder, is less and less a physical struggle, more and more a battle of minds. So the tendency has been everywhere to put a premium on mental development and disregard physical development.

Only when the disastrous effects of this one-sided development have become manifest in the sequel has the reaction come. It has become proverbial that our cities were stocked with "new blood" from the country, and that the succeeding generations of city-bred descendants were progressively degenerative. Plainly this must not continue if the gregarious impulse is to be increasingly obeyed and the average status of our race maintained or carried forward. And gradually the idea gained acceptance that in physical development lay the remedy. Hence the introduction of calisthenics into our schools, the building of gymnasia for our colleges, the springing up of athletic clubs in our cities, the amazing popular interest in athletic games, and, lastly, the marvellous conquest of the bicycle.

After all, then, this seemingly new interest in athletics is nothing new at all, but a return to nature. The masses of the people are merely opening their eyes to the lesson which nature has all along been ceaselessly teaching. The normal child, obeying the impulses of nature, is perpetually in motion. Its incessant activity is at once a lesson and a rebuke to the sedentary philosopher, but only of late has the philosopher read the lesson or heeded the rebuke.

The healthy boy takes to physical sports as the young duck takes to water. So does the young wild animal. But the young civilized animal is forced presently to give up his sports in entering on a struggle for existence that involves largely mental elements, while the wild animal's struggle for existence is of a kind to keep it developed as long as it lives. The result is that the wild animal, unless destroyed by violence, lives out, as a rule, the natural term of its life little troubled by disease. The same animal made captive, and perforce deprived of exercise, languishes, wrestles constantly with disease, and as a rule falls an early prey to consumption or some allied malady.

Civilized man who will not exercise suffers similarly from disease, and on the average does not live out half the term of his allotted threescore years and ten. Lack of exercise is not the sole cause of this degenerative tendency, of course, but it is one important cause. Hence, recognizing this, it becomes the duty of man, in virtue of his boasted rationality, to dispel this cause, and by giving proper attention to his body to prepare his mind for further conquests. The necessity for this forces itself upon him in a way that leaves no ground for question. The only things to be determined are (1) the degree of development that is to be desired, and (2) the methods by which it may best be secured.

1. As to the degree of development that will tend to preserve the health of the muscles and other organs, it is, of course, impossible to speak except in general terms. Everyone secures some measure of exercise in the routine of his ordinary life. But very few vocations are calculated to give the various muscles of the body symmetrical exercise. The rational thing, of course, is for any individual to exercise perfunctorily those sets of muscles that are not exercised naturally in his ordinary manner of living. For the vast majority of people under ordinary conditions of living the muscles that are most slighted are those of the chest and upper extremities. Nearly every one is obliged to walk enough in a day to keep his leg and thigh muscles in a condition of reasonable tonicity. But the average individual has chest and upper-arm muscles that are flabby and undeveloped to the last degree.

Measurement of a few average arms will at once satisfy anyone of this. There was a time, doubtless, when our ancestors had arms as large as their legs, perhaps even larger. Our remote tree-dwelling relatives have such arms now. But centuries of biped use have developed our lower extremities disproportionately, until now the most fully developed human arm bears no comparison in size to the thigh of the same individual (if normal). It is held by anatomists that the fully developed upper arm at the present stage of our racial evolution should be of the same size as the calf of the leg, and this size, it may be added, the same as that of the neck.

These measurements being taken as the criteria of perfectly symmetrical development, any one may easily find out for himself how far he falls short of such development. As a rule, the tape-line will show at once that it is the upper extremity which needs attention. It is not to be expected that the person who is merely exercising for health will ever develop his arm till it meets the standard of symmetrical development, nor is it necessary that he should do so. So long as he works in that direction he is on the right track, and if he keeps the muscles of the arms, chest, and shoulders in "tone," so that they tend to keep him erect, and are sufficiently firm to give support to the blood-vessels that penetrate them, he will accomplish all that is absolutely necessary.

2. How may this be done? Apparently by numberless methods, but in reality all of these are fundamentally the same. The one thing that a muscle can do primarily is to contract in the direction of its long axis. Therefore the only way a muscle can be exercised is by allowing it to contract. The only way in which the mind of any human being in the world can make itself known and felt objectively is by causing such contraction of some set of muscles. Muscles under normal conditions contract when the mind directs them to do so, and it is by voluntarily directing various

sets of muscles to perform their function over and over that perfunctory development of these muscles is effected.

It appears, therefore, that physical development in its essence is simplicity itself. Any motion that causes a muscle to contract against moderate resistance exercises that muscle and causes it to develop. Anyone by using common-sense may devise for himself exercises that will develop the weaker muscles of his body, though he be profoundly ignorant of anatomy. Remembering that all bodily movements are caused by muscles contracting on their long axis, he has only to make such experimental movements as seem likely to bring particular sets of muscles into play, and if successful the muscles of the part in question will be felt to swell and harden. Repeat the movement over and over, and you develop the desired muscles.

It is not even necessary to have apparatus of any kind whatever. Quite as good exercises as dumbbells or Indian clubs or pulley machines can give may be devised by merely clasping the hands together in various attitudes, and attempting to move one hand firmly, while the other hand is made to as firmly resist such movement. As a single illustration, clasp the hands together in front of the chest, and alternately press them firmly together (as if putting on a very tight glove) and pull them against one another as if trying to separate them. Neither hands, arms, nor shoulders need change their position more than a fraction of an inch during this procedure, and yet almost every muscle of the arms, shoulders, and chest is vigorously exercised.

The chest muscles in particular, which are with most persons greatly in need of exercise, and which most calisthenic exercises neglect, are most prominently developed by this simple exercise. I know of no other single exercise that can do so much for the particular muscles that most need assistance as this. And the best thing about this exercise is its extreme simplicity, in virtue of which it may be performed almost anywhere and at any time—while you lie in bed, while you are walking or standing, or as you lean back in your chair to rest a moment while sitting at your desk. The exercise may be varied and its value increased by varying the position of the hands, as already suggested, by placing them behind the back, for example, and by making the direction of action and resistance vertical instead of horizontal. These and numerous other modifications will readily suggest themselves to any one who undertakes to develop himself by this method.

It would be hardly possible to overestimate the health-preservative value of even so simple an exercise as this if, performed systematically for, say, thirty minutes in the aggregate at various intervals during the day, especially if it were combined with a brisk heel-and-toe walk, in which the legs were used as propellers, and not as mere pendulums, as is the wont of most walkers. The tone which the muscles acquire will soon be reflected in the tone of the brain. Lassitude will give way to mental vigor, languor to a sense of well-being (unless, of course, there be some actual disease to interfere).

But the difficulty is that with all these incentives to keep up exercise few people have the persistency to persevere in this or any other perfunctory exercise. After a spasmodic effort they relapse into the old condition of muscular flabbiness and mental lethargy. Exercising for the mere sake of exercise is so uninteresting a procedure that few people will follow it out, whatever its ultimate rewards. An element of interest must be introduced if the best results are to be attained.

This element of interest is furnished by the various competitive sports, and this is one essential point of difference between perfunctory development of one's muscles and development through entering into games. But there is another and equally important point of difference in favor of the games as against the mere calisthenics. This is that the full educational value of physical development is only to be secured through competitive exercises. Proper physical development implies vastly more than mere muscular development. It implies a trained muscular co-ordination that is essentially a brain development. Each group of muscles can contract only in a single way, but different groups may contract in endless series of combinations.

The brain, whose controlling influence makes such co-ordinate action possible, must be trained by contact with other brains. Hence physical development through athletic games has an educational value that is not approached by development through mere perfunctory exercises.

The person who undertakes to develop his muscles by entering into athletic games stands a good chance of keeping at it long enough to accomplish tangible results, because of the interest in the game itself which he soon develops. He then gets pleasure as well as benefit from his exercise, and the pleasure adds directly to the benefit, for pleasure in itself has positive disease-dispelling power. Not only will his muscles be trained, but his eye and his brain. He will learn the value of steady persistent effort as he can hardly learn it elsewhere. He will be taught self-reliance even while his egotism is kept healthfully in check. As his physical movements become quick, graceful, adapted to effect their ends with the least practicable expenditure of energy, his mental movements will tend to keep pace with the physical. In short, his training in athletics will bring about a coincident mental development that will stand him in hand in the class-room or study, and in the practical affairs of life.

As to the specific forms of athletic contests, I need not speak in detail. If you live in the country, tennis and golf, supplemented perhaps by rowing and riding, will supply the means for a splendid all-round development. For the city-dweller, these open-air sports are for the most part unavailable; for him the gymnasium must take the place of court and links.

The best gymnasium sports are handball, wrestling, and boxing.

Each of these calls into play every set of muscles; but it is desirable to practise all three if you would secure an even all-round development. It is well to supplement them also with such exercises as are supplied by pulleys, dumb-bells, horizontal bars, and the various similar gymnasium appliances, and in particular by the punching-bag. The last-named contrivance is in itself a fair substitute for a sparring partner; and it is to be particularly commended to women. Indeed, the punching-bag stands in a class quite by itself among calisthenic contrivances, in its almost human responsiveness, and in the opportunity it affords for the development of skill in its manipulation.

Fencing makes for a somewhat one-sided development, and in this regard at least it is not to be compared with boxing or wrestling; but it has the merit of being available for both sexes. The fencer develops quickness of eye, and elasticity rather than strength of muscle; these being similar traits to those developed by the boxer, and contrasting somewhat with the relatively sluggish strength of the wrestler. A good wrestler in action does not, indeed, suggest sluggishness to the casual observer, but there is a qualitative difference between his muscular action and that of the fencer or boxer. No man ever attained to actual championship form both as wrestler and boxer, though proficients in each "art" usually have some degree of skill at the other.

For the amateur in search of health, wrestling is, I am disposed to think, the best single form of indoor exercise. It was held in high esteem among the ancient Greeks, being one of the standard sports of their so-called *pentathlon* (the other four being running, jumping, discus-throwing, and hurling the javelin), and it quickly commends itself to most moderns who give it a trial under favorable conditions. An ideal hour in the gymnasium may well be concluded with a twenty-minute contest on the wrestling-mat (preferably at catch-as-catch-can style); the preceding forty minutes having been devoted to weights and pulleys and punching-bag, and three or four two-minute rounds with the boxing gloves:—it being understood, of course, that you have worked up gradually to the physical condition of "fitness" that will enable you to carry through such a strenuous hour without distress or exhaustion.

Dripping with perspiration, your skin aglow, your heart beating with full vigor, your lungs expanded to their full capacity with every breath, you step from the gymnasium floor into a hot room; thence, five or ten minutes later to the spray-bath, first of water hot as you can bear it, gradually toning down to the coldest degree from which your system will react vigorously.

Follow this with a good massage or a dry or alcohol rubbing,—and you will step forth from the gymnasium rejuvenated.

You may think it difficult to find time for such a daily experiment. You will surely lack energy to undertake it if your muscles are out of trim. But once you have known the benefits of such a practise, you will need no one to tell you that you save time by it in the end, through adding infinitely to your sense of well-being, your avidity for work, and your capacity for sustained effort.

But all this must not be taken to imply that the field of utility of physical exercises has no bounds. And here, as in so many other instances, I cannot well leave the subject without a counter word of warning. Most good things may become evils through overdoing, and physical exercise is no exception to the rule. The muscular system must be allowed to operate sufficiently to keep it in tone, if the organism is to maintain a good degree of health; but it does not follow that every muscle must be developed to its physiological limits. Indeed there is little desirability of such extreme development; it would often defeat the end it aimed to accomplish. Extreme development comes only through strenuous efforts, which are very likely to be carried to such excess as to put an undue strain on the heart muscles, leading to abnormal enlargement of that organ. Such enlargement of the heart becomes a menace to health, and may be instrumental in shortening the life of the individual.

Again the amount of time required to produce absolutely complete muscular development would be out of all proportion to the benefits derived, for the average man, even were the training so judiciously conducted that no direct evil resulted. A habit of exercising, or the practise of an athletic sport, may in this sense become a vice. We see this illustrated in the undue devotion to football among the students of some of our colleges.

But such abuses only illustrate anew the human propensity to go to extremes. The number after all of those who exercise to excess, in the hope of acquiring great skill, is relatively small; and even these have a good influence in stimulating the interest of multitudes who otherwise might not be led to practise athletics as much as their health requires. If our attention is called vividly to the injury that results to the few from excessive exercise, we must not overlook the vastly greater aggregate injury that results to the many from lack of exercise; emphasizing the old familiar lesson that between the extremes may be found the road to health and happiness.

"Education has two branches,—one of gymnastic, which is concerned with the body, and the other of music, which is designed for the improvement of the soul." —*Plato.*

"The body is the source of endless trouble to us by reason of the mere requirements of food; and also is liable to diseases which overtake and impede us in the search after truth; and by filling us full of loves and lusts and fears and fancies and idols and every sort of folly prevents our ever having, as people say, so much as a thought."

—*Socrates* (*in Plato's Phædo*).

Chapter IV

HOW TO SLEEP

"Do those things that will not injure you; and calculate before the act. Nor receive sleep upon your softened eyes before you have thrice gone over each act of the day—What have I passed by? What have I done? What necessary act has not been done by me? And beginning from the first, go through them. And then, if you have acted improperly, reproach yourself; but if properly, be glad."

—*From the "Golden Words" of Pythagoras.*

"Much sleep is not required by nature, either for our souls or bodies, or for the actions in which they are concerned. For no one who is asleep is good for anything, any more than if he were dead; but he of us who has the most regard for life and reason keeps awake as long as he can, reserving only so much time for sleep as is expedient for health; and much sleep is not required if the habit of not sleeping be once formed." —*Plato.*

IV

HOW TO SLEEP

TO round out our conception of the needs of the body, we must turn from the active to the passive side. We have considered such functions as eating, drinking, exercising; we must now consider the seemingly passive function of sleeping.

Sleep appears at first sight to be merely a negative state, a cessation of functioning, rather than itself a function. It would seem, then, that nothing should be simpler and easier than to sleep properly. As a matter of fact, scarcely anything is more difficult. Here as with all other functions there may be excess, deficiency, or perversion of functioning; and scarcely anywhere are the penalties of wrong functioning more severe than in the case of sleep. In thousands of cases insomnia proves the open door to insanity; while the common vice of excessive sleeping lays a perpetual if less tangible ban upon the mind. Of the two it is better to sleep too much than too little, but it is best to sleep just enough. Nature demands a certain amount of recuperation through sleep. She will not take less without severe penalty. But every hour in excess of what is needful is an hour less of conscious life, an hour's loss of opportunities that might perhaps, in this hurrying age, have turned the scale between success and failure. Every ambitious and thoughtful person must therefore turn with interest to the practical question: How much sleep is enough?

About a century ago Benjamin Franklin answered the question categorically:

"Six hours for a man, seven for a woman, eight for a fool!"

Like most sweeping assertions this aphorism will not bear rigid inspection. Franklin was evidently measuring other people's corn in his own half-bushel. His aphorism is merely a bit of autobiography; and it is interesting and instructive to know that so brilliant a mind as his required but six hours' rest in twenty-four. But another man might, not unnaturally, object to being classified according to this formula. He would simply transpose the words "man" and "fool" in the formula, and find it then highly satisfactory.

The plain fact is, as everybody knows or ought to know, that individuals differ, and that no general rule can be laid down to cover all cases. Some men require only five hours' sleep; more require six, yet more cannot be comfortable with less than seven; and there is a respectable modicum for whom one third of the day seems necessary. Nor is it demonstrated—to take Franklin's formula in a literal sense—that the fool requires as an average either more or less sleep than the average normal being. The difference between him and the normal man is not in the length of his day, but in its quality. If the normal man is only half-awake during his day, the fool is only one-tenth awake.

It should be added, however, that the requirements of the individual are by no means to be judged as a rule from his customs. A man may habitually sleep two or three hours longer than is necessary simply because he has acquired what I may term slovenly habits of sleeping. The penalty for such indulgence is not only loss of time, but defective sleep, into which consciousness constantly tends to enter. Although the brain probably never becomes absolutely quiescent, and although in consequence all sleep must be regarded as theoretically a dream-state, yet it is certain that in profound natural slumber the energy of the brain is at such an ebb tide that its functionings do not rise to the level even of subconsciousness. Profound perfectly natural slumber is to the awakened consciousness merely a period of absolute blank. The energy of mind has simply sunk below the level of consciousness, and, in the nature of the case, while it remains below that level there can be no conscious record of its operations. Experience has shown that in normal sleep the neural energy (whose psychic counterpart is mind) continues to sink to yet lower levels from one to two hours after consciousness is lost. Slumber is then most profound. From this point the potential energy gradually increases, like an inflowing tide, slumber becoming less and less profound, until finally the level of consciousness is reached, and the sleeper awakens.

That consciousness is really farther withdrawn, if I may be permitted the expression, during the period of deepest sleep than before or after this period admits of no question. A sleeper is awakened at such a time with relative difficulty, and on awakening he is apt to be confused, and to lapse again into unconsciousness if allowed to do so. Familiar illustration of this comes within the experience of most persons who are often aroused at night. The physician, for example, often finds it positively distressing to be aroused when he has been but a short time asleep, while minding but little a call that comes later in the night. A touch of his bell awakens him at either time because his mind is keyed constantly to responsive expectancy in regard to that one sound; but from the profound period of sleep he awakens momentarily confused, and perhaps even with a feeling of tension amounting to pain in his head, from the sudden onrush of neural energy; while from the less profound later sleep he awakens fully at once, and without sense of oppression.

The fact that the organism sinks to its lowest level of kinetic energising so soon after consciousness is lost has given rise to the current saying that "an hour's sleep before midnight is worth two after midnight"; a statement that is often true simply because most people retire one or two hours before midnight. The middle hour of the night, as such, has nothing to do with the matter, the fact being merely that the first hours of sleep, other things being equal, are most profound and hence most restful.

The mistaken notion that sleep is deepest just before waking, is naturally linked with that other sophism that it is darkest just before the dawn. Each is the antithesis of truth. If it be true, as has often been alleged, that Indians are most successful in raiding a camp just before dawn, it must be because the sentry who has been awake through the night is more likely to relax vigilance and fall asleep then; for there can be no question that a sleeper who has slept several hours is constantly becoming, under normal conditions, less profoundly unconscious. He is gradually approaching the waking-point. It is true indeed that the "vital energy" of the organism as a whole is at its lowest ebb in the early morning hours; but the stored potential energy of the brain whose unloosing results in consciousness, is under higher and higher tension as the period of sleep progresses.

As to the exact conditions existing in the brain during waking periods and during sleep, much is conjectural. In general terms, however, it seems tolerably certain that consciousness is the result of destructive chemical processes in the brain. Along with this destructive action, it is assumed that constructive or reparative processes are also in operation. But it is further assumed that during waking hours the destruction exceeds the repair; and that hence arises the necessity for periodical epochs of sleep, during which the destructive processes shall be in excess. The brain considered as an organ of thought must be, as it were, closed for repairs at pretty regular intervals. In this view, consciousness is present so long as the destructive physical changes in the brain are in excess, and sleep is the period during which recuperative processes are paramount. It would be hard to demonstrate that this statement represents the exact facts, but as a general proposition it is no doubt sufficiently accurate.

There is a third condition, however, which thrusts itself upon the attention; an intermediate state of mental activity which is not strictly speaking conscious, though recalled and reproduced by waking consciousness. This intermediate period is called the dream-state. It is open to question whether the dream is a normal phenomenon, but it is so slightly abnormal at most, and so universal an experience that it cannot be overlooked in a general discussion.

What then is a dream?

To the best of our knowledge, a dream is the result of an isolated or partial activity of the brain, at a time when the general level of cerebral energising is below the level of consciousness. During waking hours, one or another set of brain cells is always most active, but these cells are always co-ordinated with other sets that are also active, the result being that consciousness is never a single train of thought, but a series of relatively vivid ideas placed in a setting of less vivid ideas. The subsidiary ideas furnish the mind its perspective or vista—its "third dimension"—and they are a constant and necessary corrective in enabling the organism to judge rationally of its true relation to its environment. The absence, or very great restriction, of such mental perspective, due to the general inactivity of the brain, is the essential difference between the dream and waking consciousness. It is for this reason that the ideas of the dream have such seeming thraldom over the mind. The most grotesque creature of the imagination, appearing during sleep, and hence without a vista of corrective ideas, imposes itself on the mind as a frightful reality, which perhaps will not vanish till other channels of the brain have been aroused to activity, bringing consciousness with its wide range of corrective perceptions and memories.

If, as we thus assume, the dream is the mental accompaniment of all inco-ordinate activity of the brain, it is important to know what causes such ill-timed and ill-adjusted activity. Like all other organic activities, it is a response to external stimuli. But these stimuli may be in operation at the moment or may have operated during the period of waking to produce mental anxieties that will not now allow the brain to sink into profound restfulness. Stimuli that act directly are unusual sounds, the noxious air of a badly ventilated room, a cramped condition of a member of the body, irritative conditions of the digestive organs, and the like. In the present sense, any portion of the body outside the skull may furnish an external stimulus to the brain; and the stimuli which produce dreams probably come most often from within the organism.

It is evident that the condition of the brain itself will largely determine the exact result of any disturbing stimulus that may come from any source during sleep. During profound sleep, a very active stimulus may fail to produce a response sufficient to be recorded in a dream; while later on, after the brain has partially recuperated, a much lighter stimulus may serve to introduce a series of dreams. It must be obvious, too, that during the later hours of sleep, when the entire brain is nearer the waking-point, activity of any isolated brain tract will tend to spread to other tracts, thus widening the mental view, and giving background or comprehensiveness to the dream.

Other things being equal, then, dreams will not only be more frequent during the morning hours, but such dreams will more nearly approach the range of ideas of waking consciousness than the dreams of earlier hours. That this is the fact, almost anyone can demonstrate to his own satisfaction by allowing himself to fall asleep again after his usual time for arising. He will then sleep very lightly, and the images that flit before his mind will be so wide in range, so similar to the images of a waking reverie, as sometimes to make him uncertain, when he again awakens, whether he has really been asleep. At such a time there is little danger of the appearance of those grotesque and disproportionate images without background—so-called "nightmares"—which sometimes intrude themselves upon the deep sleeper.

But whether it comes early or late, and whether vivid or vague, painful or pleasurable, the dream must be looked upon as a discordant element in the mental cycle. Anyone who dreams habitually is not sleeping to the best advantage. The brain which is partially active when it should be everywhere quiescent is not being repaired as rapidly as might be. Of course a certain amount of disturbance is unavoidable under ordinary conditions of living. Nature kindly withdraws the light, and with it visual stimuli, but noises are not so readily suppressed. Fortunately, however, the brain soon learns to adjust itself to noises that are constant or that recur regularly. The passing of trains, the ringing of bells, the blowing of whistles, and the like, do not disturb the sleeper after they have been regularly experienced for a little time, and all such sounds may be practically disregarded in considering the therapeutics of sleep.

The brain cannot guard fully against unusual and hence unexpected sounds, and in almost any environment these furnish an occasional disturbing factor against which there is no direct safeguard. But they will disturb the sound sleeper far less than the light sleeper, and will not ordinarily annoy one who has acquired good habits of sleeping. The sleep of a tired boy illustrates how fully the brain may be withdrawn from responsive accord with the outer world, and furnishes an object in truly profound and recuperative sleeping. You might discharge a gun over him without fully arousing him. Even if he stirs and partially awakens, he will relapse at once into a deep sleep, and the intruding stimulus will probably not be remembered even as a dream. And the sleep of an adult who has retained the good habits of sleeping which almost everyone has in childhood, will be comparable to this. He will not require so much sleep as the child, because he has only to make up the waste of the previous day while the child must make up his day's waste and add an increment for growth. But if the adult takes only what sleep he really needs, and takes it in a perfectly normal way, his period of sleep will be approximately as profound as that of the child.

That very few adults have perfect habits of sleeping, goes without saying; that such habits are to be desired requires no argument. But how may they be acquired? This is the question to which all the previous discussion has been preparatory.

Bearing in mind always the fact that each individual must be in some measure a law unto himself in this matter, I shall attempt to formulate a few practical suggestions in such general terms as will apply to all alike. By good habits of sleeping I mean such habits as will enable the organism to recuperate most fully in the shortest time, it being assumed that waking hours are valuable and to be coveted.

But this must not be interpreted as meaning that we are to attempt to reduce the period of sleep always to some fixed minimum number of hours. People differ from one another too much to make that possible. Each individual should strive to find what is his own minimum period of necessary sleep, and be governed accordingly.

Remember always that it is better to sleep eight hours if necessary and begin the day with a mind really refreshed, than to attempt to get along with less than is needed. A fully refreshed mind will accomplish more in sixteen hours than the same mind unrefreshed could accomplish in eighteen.

It is worse than folly to train oneself to arise at five o'clock if the mind is not ready to begin the day's work of thinking at that hour. Better sleep on till eight or nine if that much rest be necessary to bring the mind to its best level of working efficiency. An hour added to the thinking day is a valuable hour only when it takes nothing from the working efficiency of the other hours.

By all means then take as many hours of sleep as are needed, regardless of the number that suffice for some other person.

The chief difficulty in determining the necessary period in any given case, results from the irregularities of living that enter into almost all our lives. Civilization imposes many artificial conditions upon the individual, but in no respect more than regarding this matter of sleep. Man is a diurnal animal. Under strictly natural conditions, his hours of sleep would be regulated very largely by the rising and setting of the sun. But artificial lights emancipate us from so onerous a bondage, and the evolution of our race has carried us so far from strictly natural conditions, that no one would now think of arguing that it would be necessary or even best to regulate our sleeping hours according to any such obsolete standard.

Even the dictum "early to bed and early to rise" is obsolescent. There are as many hours from twelve to eight as from ten to six, and while the earlier set has some inherent advantages, it has not been demonstrated that the later set is incapable of doing the same work and doing it just as well if put to the test. For persons living under the ordinary conditions of city life, I make bold to affirm the conviction that the later series is a better one than the earlier. And why? Because under such conditions of living it happens to most people that two or three evenings in a week will be lengthened to something near the later hour by opera, theatre, or other pleasure gathering, thus breaking in on any habit of earlier retiring if such were formed; and because regularity is the keynote of success in acquiring good habits of sleeping. A person who retires to-night at ten, to-morrow night at twelve, the next at nine, and so on through the week can scarcely be said to have any habits of sleeping. He simply fulfils the imperative function of sleeping because he must, and when he may. While such customs are continued he can never know how much sleep he really requires, nor how to secure it to best advantage.

The first pre-requisite to acquiring good habits of sleeping is, then, to accustom oneself to retiring at a fixed and definite time. A very difficult prescription, it may be said; but a necessary one. If you must remain up till twelve, half or even one-third of your days, let your regular hour for retiring be twelve every night. If your business hours begin at such time in the morning that this will not allow you time enough for sleep, then there is something radically wrong with your system of living. You are burning the candle at both ends and ill-health will be the penalty. You must curtail your day at one end or the other, preferably at the night end if you can so arrange it.

But whatever the hour most expedient for retiring, once selected let it be adhered to rigorously. By so doing you will teach your brain not to expect sleep till that time; and what is quite as important, *to* expect it *at* that time. This accomplished, the first and perhaps most important lesson in sound sleeping has been learned. And it is marvellous what a power a fixed habit has over the organism. He need little fear insomnia who has taught his brain to expect rest at a fixed and definite hour each night. Of course a man cannot become an actual automaton; but the more closely he adheres to a definite minute in this matter, the more efficient, other things being equal, will be his sleep in recuperating a tired brain.

So far so good. Going to bed is a voluntary process; but to retire is not necessarily to sleep. What if the mind prefers to go on with its conscious action? This, it may be confidently said, is a matter that in time will regulate itself. When good habits of sleeping have been acquired, the head will scarcely touch the pillow before consciousness will disappear, only to come again at a fixed and definite time next morning. But of course while one is acquiring the habit, and as an aid to that end, one may need to resort to various soporific expedients. Of drugs I shall say nothing. Those are for your physician to prescribe to meet the individual indications of your case, if you need them at all, as is unlikely. But I may refer to some minor expedients.

Good sleeping, in the first instance, is the converse side of active waking mentality. The brain does not need repairing till it is worn. In certain forms of melancholia the patient scarcely sleeps at all for weeks together, because his brain is scarcely called upon to functionate, mentality being sluggish to the point of stupor. The patient does not sleep, but neither can he be said to be fully awake; his mind is at a dead level of dazed half-consciousness. He performs no mental operation that presupposes more than the slightest neural activity.

Similarly, a normal person whose mental life is listless, shifting lightly from one field to another, and fixing intently nowhere, may so little exhaust his brain that it does not demand rest with the imperativeness of a well-used brain. Such a person's prescription for sleeping is to use the mind more actively during the day.

But again there are cases of exactly the opposite kind, in which the brain becomes so wrought up through active exertion that it refuses to become quiescent when the hour for sleep has come. It should be said that this is likely to result from emotional over-activity, rather than from strictly intellectual; and that when it occurs habitually from the latter the organism is bordering closely upon disease. An obvious remedy is to devote the later hours of the evening, before retiring, to light and recreative mental operations, such as ordinary conversation or "light" reading, physical measures being attended to as a matter of course. Of the latter, taking a warm bath at bed-time, or drinking a glass of warm milk are often efficient.

Numberless mental expedients have been suggested as aids to sleep for the active mind; such as imagining a flock of sheep passing through a gate; counting indefinitely; repeating a phrase over and over. The radical defect of most of these suggestions is that they imply a focalisation of attention upon something, even though it be a very uninteresting something, and that such concentration of attention tends to defeat the object it is intended to accomplish. A far better expedient in my experience than any other I have seen suggested is this:

Challenge systematically any line of thought that appears, and banish it from consciousness. The thing is not difficult for a disciplined mind. You have simply to vow mentally as you find yourself thinking on any subject, "I will not think about that," and as it were you shut off the current in that direction. Of course through association your mind is instantly supplied with some other line of thought; but this also you challenge in the same way as soon as it appears, and so on as long as you are conscious. You thus prevent any single line of thought from becoming paramount in consciousness, and one line after another being subordinated, the tendency is to a lower and lower level of mental activity, till presently consciousness is lost. It is possible for some persons to put themselves to sleep voluntarily in this way at any time when they choose even during the day and in the midst of most active thinking. The boon which such an accomplishment furnishes a tired brain on occasion, makes the acquisition of this power well worth the effort.

Consciousness withdrawn, of course the mind becomes a strictly passive factor. If ill-adjusted currents flit through the brain, lifting the mind to the subconscious level of dreamland, there is no immediate redress. When we fully understand that dreams are the result of disturbing stimuli from without the brain, we may often do much to prevent their recurrence. Attention to the general bodily condition; a well ventilated sleeping apartment, from which disturbing sounds are as far as possible excluded; proper coverings, and the like are almost axiomatic expedients. But especial attention should be paid to the digestive system. All impulses from all the organs in the body are recorded in the brain, even if not within the ken of consciousness; and during sleep, when most other stimuli are withdrawn, these "organic" impulses assume greater relative importance. If then at this time the digestive system is forced to undue activity, as by the ingestion of hearty food shortly before retiring, its operations are almost sure to be registered in the brain with disturbing force.

A misunderstanding has arisen regarding this matter from the fact that milk or other easily-digestible food is often prescribed at bed-time for the relief of insomnia, or in case of patients of impaired vitality. But the food is given in these cases for a strictly therapeutic effect; it being sought with its aid to withdraw blood from the head to the stomach in the case of insomnia and to furnish pabulum for continued repair of wasted tissues in the neurasthenic patient. It is a temporary expedient in each case, to meet a particular indication; and even then the food given is small in quantity and of digestible quality. The patient who is benefited by this measure would find it disastrous to eat a hearty meal before retiring, and even persons in health cannot do so with impunity.

For persons in ordinary health, it is better that the stomach should be empty when the period of sleep is entered upon, provided that a sufficient amount of nourishment to supply pabulum for repair has been taken a few hours earlier. This pabulum, already digested, is then beginning to enter the circulatory system, and the repair of the tissues can go on with the least possible organic disturbance.

It scarcely needs saying that these and all other expedients will fail of effect in producing profound and restful sleep in persons of a certain temperament, who are constantly harassed and worried by the ordinary incidents of every-day existence. These will carry their mental worriments even into sleep, if indeed they are able to sleep at all, and intrinsic stimuli of the brain itself will suffice to keep the disturbing currents operative. Such must turn to their philosophy of living to find the root of their malady.

As to the time of awaking from a properly conducted period of sleep, that also is to be prescribed by habit, and should become quite as fixed and definite as the time of retiring. It is marvellous what an accurate alarm-clock the mind becomes when trained. It is better, however, not to test it in this regard while acquiring good habits of sleeping. If on retiring you resolve to awaken at five on the morrow, you will probably do so, but your mind will be kept unduly active during the night. It is better to trust to objective alarm-clocks and not to burden the mind with any special task in the absence of consciousness. After the proper method of sleep for the individual has been determined and for a time practised, the mind will become active almost at a given minute each morning, through the vigilance of the ever present guardian, Habit. In determining just what minute this shall be, each individual must experiment upon himself.

Having fixed upon an hour for retiring, you must next determine at what hour you will arise. Remembering that very few people indeed can get along to advantage with less than six hours' sleep, and that very many require fully eight, you may perhaps as well begin with seven. If experiment, lasting through a period of at least two weeks, shows this to be too short a period of sleep, the time must of course be lengthened. If, on the other hand, it proves fully sufficient, the period may be shortened tentatively; but most persons will find that about seven hours is their minimum requirement, at any rate until they have learned to sleep very soundly indeed.

The test as to whether one has had sufficient sleep of the right kind is to awaken refreshed and full of energy for the day's work, and to carry this energy, making reasonable allowance for the healthful fatigue of energetic action, throughout the period of waking.

Passing quickly through that period of reverie that precedes the full inflowing of consciousness on awakening, one should feel suffused with a sense of well-being, a vitalising consciousness of being "awake for all day," and should find himself impelled to the duties of the hour with eager enthusiasm, not dragged with reluctance as poor sleepers usually are.

Yet I suppose the mass of humanity never learn even to get out of bed properly and easily, notwithstanding daily practise. The seductive morning doze—almost the worst of mental habits—captures the great majority. For the person who wishes to use his mind to the best advantage it is a snare and a delusion. Dozing after the brain has been fully recuperated implies a kind of half activity that brings little or no refreshment. If indulged habitually, the organism, quick always to acquire indolent habits, soon comes to expect to recuperate its forces in this dilly-dallying way; and as a result the entire period of sleep becomes less profound, and more and more invaded by disturbing dreams. Perhaps nine hours are regularly taken for an amount of recuperation that might be accomplished to better advantage in seven; the creative mind thus surrendering two hours a day of its invaluable time to the useless indulgence of an indolent body.

Moreover, it may be questioned whether something of the same languor of action that marks the state of sleep does not also invade waking hours; whether, in short, such an organism ever comes to be quite as wide awake as it would be were its habits of recuperation more energetic. The actions of the body as a whole are usually consistent, and if its constructive neural processes are carried on languidly it is probable that the destructive processes will be equally languid. Let anyone who is accustomed to sleep soundly and to arise at once on awaking test the matter by dozing for an hour or two some morning after his usual time for arising. He will find, I think, that he has not added to the working efficiency of the day by so doing.

Be it understood, however, that this applies only to dozing in the morning, after the brain has had its full necessary period of rest, and when it is really ready for active exertion. A short "nap" later in the day, after the brain has been for several hours intensely active, is quite another matter. There are some persons who, either from intense activity of mind, or because of lack of initial vitality, cannot seem to store enough energy to carry them through sixteen or eighteen hours of continuous mental activity. Such persons may be enormously benefited by a nap, usually of not more than a half-hour's duration, at mid-day. Even so brief a period of sleep as this often suffices to wash out the waste products of activity, and bring the brain to a plane of recuperation that will enable it to act efficiently during the remainder of the period of waking.

As a rule, however, where the brain is not asked to do more work than it can healthfully accomplish, a single period of sleep of the right duration and intensity is all that the organism requires in the twenty-four hours. He whose brain has been taught to ask for such refreshment at a given interval and to partake of it fully and eagerly, knowing that its time for recuperation is only just so long, has not only taken an important step toward warding off insomnia and the diseases that attend it, but has attained a most advantageous mental coign of vantage from which to sally forth upon the battle of life. His estimate of the ideal of happiness will be truer and saner; his chance of attaining that ideal will be vastly enhanced.

Part II

MENTAL ASPECTS OF THE PROBLEM OF HAPPINESS

"The wealth of mind is the only true wealth; the rest of things have more of pain than pleasure."

—*Lucian, in the Greek Anthology.*

Chapter V

HOW TO SEE AND REMEMBER

"Memory and Oblivion, all hail! Memory for the good; Oblivion for the evil." —*The Greek Anthology.*

"Men err in their choice of good and evil, that is, in their choice of pleasures and pains, from defect of knowledge."

—*Plato.*

V

HOW TO SEE AND REMEMBER

THERE is perhaps no other mental endowment that seems to give such direct and tangible evidence of mental power as the possession of an unusual memory. Records of exceptional mnemonic powers always excite interest and wonderment. It is little less than appalling to the man of average memory to listen to some of the tales that pass current in this connection.

We are assured, for example, that Caesar knew by name many thousands of the soldiers of his legions; that Beethoven could memorize a most difficult and complex piece of music by hearing it once or twice; that a certain librarian knows the exact shelf-location, as well as the title and author, of every book among the tens of thousands in the library of which he has charge; that Beronicius of Middleburgh knew by heart the works of Virgil, Cicero, Juvenal, Homer, Aristophanes, and the two Plinys; and that Macaulay could repeat the whole of the "Iliad" or of "Paradise Lost" off-hand, and could converse fluently in "numberless" tongues.

Again we are told that Leibnitz, "in order to impress upon his memory what he had a mind to remember, wrote it down and never read it afterwards;" and that Viscount Bolingbroke "retained whatever he read in so singular a manner as to make it entirely his own," so that "in the earlier part of his life he did not read much, or at least many books, for which he used to give the same reason that Menage gave for not reading Moreri's Dictionary, namely, that 'he was unwilling to fill his head with what did not belong there, since, when it was once in, he knew not how to get it out again.'"

Contrast all this with the case of the average man, who sometimes forgets the names of his personal friends; who requires a week to memorise a single tune; who can not tell just where to find the volumes of his own little library; whose stock of quotations is limited to about a score of couplets; who spends a lifetime trying to learn to speak two or three languages; who makes notes expecting to consult them, and then forgets what he has done with the notes; and whose chief concern is, not how to get rubbish out of his head, but how to keep anything in. This average man, himself making the contrast between those vise-like memories and his own feeble and yielding equipment, may not unlikely be disposed to feel that Nature has dealt unkindly with hm. Nevertheless he may find crumbs of comfort if he search for them.

It is gratifying, for example, to be told by so great an authority as Sir William Hamilton that a too retentive memory interferes with clearness of thinking by presenting too many conflicting details and thus bringing confusion. It is cheering, too, to reflect that before the advent of general culture through the invention of printing, everybody carried all his knowledge at his tongue's end. Phenomenal memories were then as common as the lack of them is at present; yet no one pretends that these great memories pre-supposed or produced great minds. Then it is a positive boon to have a man appear now and then like the one who applied for the position of interpreter in New York recently, who can speak nine languages fluently, and has not general mental capacity enough to learn to write even in one language.

Or looking at the matter from a slightly different aspect, it is pleasing to consider the mnemonic deficiencies of some men of confessedly great mentality. The matchless Newton, we are assured, after working out an elaborate mathematical calculation, could not remember how he had accomplished it. And Huxley is reported to have said that he had no verbal memory, and could not repeat half a dozen quotations of any kind verbatim.

After considering such seemingly contradictory phases of the subject, one naturally feels doubtful as to the status of memory, and is not certain whether to deplore or rejoice over the fact that his own memory is defective. The key to the situation is found in the fact that very few people have ever developed their memories to the extent of knowing their real capacity.

Undoubtedly some people are endowed with "natural" memories, but it is just as certain that very few people ever give their memories a fair chance, especially in this age of newspapers and many books.

The great mass of what we read and hear we do not expect, indeed do not desire, to remember. What could be more horrible to contemplate than the state of mind of a man who should remember all that he has read in the daily paper for a single year? The very plethora of subjects drives us into slip-shod methods of reading and insures facile forgetting. The days when men remembered everything that they heard were the days when few things were to be heard. The man who has a day's history of the world for breakfast must expect mental indigestion. His mind would be a hopeless junkshop of useless information if he were to remember one tithe of what he reads. So he sedulously cultivates a poor memory; and then bemoans the hard fate that has failed to make him a living phonograph.

In justice to Nature it must be said of memory, as of the receptive faculties, that every man of ordinary mind has capacity enough in this direction to make him an "able man" if his other faculties match it, and if it is properly developed. Illustrations of the possibilities of memory–development in minds of very mediocre calibre are familiar enough in every-day life. Doubtless the reader has sometime dined with a half dozen friends at a restaurant where the old-fashioned method of taking verbal orders from the menu is still in vogue. Which one of you could remember the various orders as the waiter does? He has a remarkable memory indeed, you say. Not at all. He has simply put in practise the elementary rule for the cultivation of memory (without ever having heard it) and so has developed his memory in one line to about its normal limit.

The psychological law on which the waiter has unconsciously acted is the very simple one that vivid impressions are lasting. If you will take a mental retrospect of your life, you will find that certain particular events stand out conspicuously in a generally blurred field. In a hurried glance, perhaps not more than one event for each year of your life will come prominently into the field.

What are these events? Those that made a strong impression at the time because of their novelty or their importance, or both. Graduation from school; the entrance upon practical life; changes of business or residence; marriage; the death of a relative or friend, and so on.

These events are the milestones by which we measure our span of life as we look back. They are permanent, ineffaceable records of memory. As we dwell on the picture in retrospect, other minor events come to view. Numerous details of transactions, little incidents apparently forgotten, are recalled. But after memory has exhausted its possibilities, we must feel that where one event is recalled a thousand are forgotten.

Of our myriad experiences, why have these few been singled out for permanent record, while the rest are consigned to oblivion?

The answer is but a reiteration. It is because these were vividly or persistently experienced. But why were they vividly or repeatedly experienced? Because they possessed an interest for us. It may have been the interest of novelty, or the interest of importance; it may have been interest developed of fear or apprehension; but it was surely interest, for interest is the mother of attention, and from attention comes vividness of mental presentation which lies at the foundation of memory.

Why then does the waiter remember your order? Primarily because he listened to it attentively, it being for his interest to do so; and the attentive listening insured vivid and lasting impression; lasting, that is, for a few minutes, as long as it will be of any use to have it last. But this is not quite all. The great master Habit has also come into the transaction. The novice could not remember those lists however he strove to concentrate attention on them; but repeated experiences of memorising disconnected lists have resulted in proficiency through habit; that is to say the waiter has become as regards this one department of mind, a cultivated being,—for culture consists only in the acquirements of good habits of mind.

The lesson of all this is that every man may cultivate his memory to an astonishing degree if he will develop an interest in the subject to be memorised, as this will lead to attentive consideration of the subject, insuring vivid presentation and lasting recollection. A man cannot change the inherent nature of his tissues. Some organisms are inherently more receptive than others; they may be likened to instantaneous plates of the photographer. Other organisms are relatively non-receptive, like the old wet plates. There are obvious advantages with the instantaneous plate; but it must be remembered that the old wet plate, if given time for the impression to make itself felt, will produce just as good a result as the more rapid one.

And the parallel, fortunately, holds as to the minds. Repeated impressions of the same kind will take the place of a single vivid impression. Macaulay reads a poem once and can repeat it. But any man of ordinary mind can learn to repeat that poem, if he set about it with determination and continue the effort. He may need to read it ten, twenty, a hundred times, but in the end he accomplishes the same result as Macaulay. The only difference is a matter of time. Webster scans a page and grasps its meaning at a glance; the plodder creeps alone the lines; but each has the same idea at last.

There are obvious advantages with the ready learner, when one reflects that life is so short and that there is so much to learn.

But the plodder should not think that life is short. He should say rather, "Life is long, and there is time for everything." He should know that Macaulay or Webster can not keep up indefinitely those rapid, vivid perceptions. The brain tires in proportion to what it does, rather than in proportion to the time in which it does it. The receptive mind does its work quickly and must rest soon. The non-receptive mind works slowly but can work long. The race is not always to the swift. While the receptive mind is resting the other may pass on, tortoise-like, to the goal.

But to accomplish this result requires rightly directed effort. It is desirable that the mind not specially endowed should be cultivated to its limits in all directions. A moment's reflection shows how far short of this most minds remain. Most eyes literally see as through a glass, darkly. The average person going into the fields will not see or hear one bird where the ornithologist would see and hear scores; will scarcely observe a flower or insect, where the botanist or entomologist would find countless specimens. I have seen three orioles' nests suspended from the branches of an elm in the dooryard of a family no member of which had ever heard of an oriole or its song or recalled ever to have seen a bird of black-and-orange plumage.

And this half-blindness is but typical of what one finds in every direction, if one analyses the observing powers of one's acquaintances. I have known a woman of intelligence, when asked to make the experiment of sketching the profile of a face, to look intently at the sitter and actually draw the profile facing in the wrong direction. That perhaps is an extreme case, but if you ask your average acquaintance to sketch almost any familiar object, you will get scarcely less startling results.

Not one untrained person in ten can glance at such a familiar object as, for example, a tumbler placed in front of him, and depict its top with an approximately correct oval. The sketcher knows that he is representing something that is really round and this knowledge will pervert his vision.

Again, how few untrained eyes present to their possessors anything like a correct picture of the lights and shadows which really determine for us the character of all the objects about us. Ask your friend to look intently at a ball laid in front of him and make you the simplest picture of it with three gradations of shade to mark (1) the deepest shadow, (2) the medium tone, and (3) the high light; and see how ill is the service that his eye does him. A very large portion of the training of the art schools consists merely in teaching the eyes to see.

But the defects inherent in the average method of using the normal senses are most apparent when we witness the extreme development of certain senses under conditions that make training necessary. Thus everyone knows that the blind come to have almost preternaturally acute senses of hearing and of touch; while the deaf-mute correspondingly develops his vision until, for example, he may even be able to read the speech of a companion by watching his lips.

These are instances in which the organ of hearing or of sight is developed to a degree of perfection it would unquestionably not have attained had no special stress been brought to bear upon its development. And this fact suggests that the eye and ear of the average normal person might be trained to something like a corresponding degree of efficiency, were the proper attention given to such training.

Learn to challenge your eye and ear; to demand of them that they bring you explicit records of all the objects and sounds that come within their ken, and you will be amazed to see how full your world becomes of things that hitherto you had disregarded, and how much your capacity for enjoyment will be extended.

Similarly the average memory, if trained and put to the test, will develop possibilities undreamed of. You may not be able, like Sherwood, to memorise a thousand pieces of music; or, like Pillsbury, to play twenty blindfold games of chess while simultaneously playing a game of duplicate whist; or like Asa Gray to recall the names of 25,000 plants; but you will astonish yourself and your friends with the improvement you may make on what you had supposed were your limits of memorising. I know a man who plays three simultaneous blindfold games of chess and usually wins against very competent opponents, and yet who claims that he has not, in any sense, an unusual memory; that, on the other hand, various of his business associates are unquestionably better endowed in that regard than he. He has simply developed his memory in one direction to something like its normal limits, somewhat as the average Brahman develops his memory to its limits when he learns to repeat the 10,000 verses of the Rig-Veda, or the average Mohammedan when he learns the Koran by heart.

A striking illustration of the latent possibilities of memory-development is furnished by the case of Heinrich Schliemann, the famous archæologist,—the man who discovered the site of ancient Troy. Schliemann began relatively late in life to take up the study of languages. By assiduous application he mastered one after another until he came to regard the acquisition of a new language as a mere pastime. Yet he explicitly disclaimed any exceptional endowment of memory. He believed that any average person could do what he had done by making such application as he had made. Doubtless he modestly under-estimated his own powers, but at least it is certain that he would not have known of his exceptional capacity had he not, almost by accident, put it to the test. And note, if you please, the strenuous methods by which he achieved success. "In order to improve my position," he says, "I applied myself to the study of modern languages. My annual salary amounted to only eight hundred francs (60 dollars), half of which I spent upon my studies; on the other half I lived—miserably enough to be sure. My lodging, which cost eight francs a month was a wretched garret without a fire, where I shivered with cold in winter and was scorched with the heat in summer. My breakfast consisted of rye-meal porridge and my dinner never cost more than two pence. But nothing spurs one on to study more than misery and the certain prospect of being able to release oneself from it by unremitting work.

"I applied myself with extraordinary diligence to the study of English. Necessity taught me a method which greatly facilitates the study of a language. This method consists in reading a great deal aloud, without making a translation, taking a lesson every day, constantly writing essays upon subjects of interest, correcting these under the supervision of a teacher, learning them by heart, and repeating in the next lesson what was corrected on the previous day. My memory was bad, since from my childhood it had not been exercised upon any object; but I made use of every moment, and even stole time for study. In order to acquire a good pronunciation quickly, I went twice every Sunday to the English church, and repeated to myself in a low voice every word of the clergyman's sermon. I never went on my errands, even in the rain, without having my book in my hand and learning something by heart; and I never waited at the post-office without reading.

"By such methods I gradually strengthened my memory, and in three months' time found no difficulty in reciting from memory to my teacher, Mr. Taylor, in each day's lesson, word by word, twenty printed pages, after having read them over three times attentively. In this way I committed to memory the whole of Goldsmith's *Vicar of Wakefield* and Sir Walter Scott's *Ivanhoe.* From over-excitement I slept but little, and employed my sleepless hours at night in going over in my mind what I had read on the preceding evening. The memory being always much more concentrated at night than in the day-time, I found these repetitions at night of paramount use. Thus I succeeded in acquiring in half a year a thorough knowledge of the English language.

"I then applied the same method to the study of French, the difficulties of which I overcame likewise in another six months. Of French authors I learned by heart the whole of Fénelon's *Adventures de Télémaque* and Bernardin de Saint Pierre's *Paul et Virginie.* This unremitting study had in the course of a single year strengthened my memory to such a degree that the study of Dutch, Spanish, Italian, and Portuguese appeared very easy, and it did not take me more than six weeks to write and speak each of these languages fluently."

Many a reader who has tried with indifferent success to learn a language will admit, I suspect, on reading this account, that he did not make what Schliemann would have considered a serious effort. If you are willing to work as Schliemann worked, perhaps you too will discover that you have a genius for language. If such should chance to be the fact, it is certainly worth while to find it out. And in any event, even if you fail to develop exceptional powers, undoubtedly you may improve upon present conditions.

Demand explicitness of your memory, then. Expect it to record experiences accurately. When you read something worth knowing, stop and fix your mind upon the fact or idea and resolve to remember. Repeat it to yourself from time to time until it is fixed securely. On recalling what you have read, or incidents of your experience, train yourself to make a continuous mental narrative, stating names and facts precisely, without slurring and without exaggeration. It is the *method* that counts. It does not so much matter what the pabulum upon which your mind feeds, as how it learns to utilise it. The habit of clear-seeing and accurate-remembering, once acquired, will lead you to knowledge that is worth acquiring and remembering. And there is pleasure no less than power in knowledge.

All along do not forget the value of repetition. We hear much of the receptive memory of childhood, but in reality the child learns only by incessant repeating. Were it otherwise the school child would go through its arithmetic, its grammar, its geography, and all the rest in a few weeks; a year or two would suffice for the period of schooling. Yet we all know how many years of painful effort are required for the attainment of even a fair degree of education.

In point of fact, despite the popular belief to the contrary, most adults could learn more of a given subject in a given time than they ever could have done when they were children. If you will take up a language, for example, you will find that you can learn it as fast as your child can, if you give it the same effort that the child is obliged to give. Do not say "I am too old"; but begin to-day to acquire any knowledge you may think it desirable to have, and persist in the effort. Herschel, the greatest of observing astronomers, never so much as saw a telescope till he was thirty-five, and he continued to earn his living as a musician for some years after he became the most expert of star-gazers. Schliemann did not take up Greek till he was thirty-five; a few years later he could use that language with the facility of his mother tongue. Elizabeth Cady Stanton began the study of music at three score and ten. Queen Victoria began Hindustani at the age of eighty. It is never too late to mend our frayed mental habits or to develop seemingly new capacities.

The keys to such development, let me say again in conclusion, are Interest and Repetition—interest in the things of your physical and mental environment to make you a good observer, and repetition to fix your observations in memory. Every teacher knows that the great difficulty with children is to gain their interested attention. If the average child could be made to believe that its school lessons are of real value and really worth its while to learn, it would learn them twice as well in half the time. The difficulty is that the child mind is opinionated. The youth regards grammar, algebra, Latin, and the rest as studies that can be of no possible use to him in after life, and therefore he is content to give them just enough thought to "pass" and then forget them as soon as possible. The child does not realise what he is doing; later in life he usually comes to see, and bitterly to regret, his folly.

Similarly the average adult fails to realise what he is doing when he allows himself to develop a blurred vision and a slurred habit of memorising. The average reader has habits of mind that are slovenly. Every man and woman of your acquaintance read full accounts of the Russo-Japanese war a few months ago; but ask even the most intelligent of your acquaintances to give you in precise, condensed phrases, an epitome of these events, mentioning the names of the leading officers on either side and the location of the chief battles, and see how painfully defective the narrative will be. Yet the chief value of any knowledge depends upon its precision.

Challenge your memory, then, regarding such slovenly habits. Cultivate an interest in the things of life that are worth while. Resolve to see accurately and to remember precisely. By so doing you will infinitely widen your horizons. You will add to your efficiency as a rational, thinking being. You will take a long step toward the acquisition of what your friends will call ability,—a long forward move on the road to success, where stands the goal of happiness.

"The exchange of one fear or pleasure or pain for another fear or pleasure or pain, which are measured like coins, the greater with the less, is not the exchange of virtue. O, dear Simnias, is there not one true coin for which all things ought to exchange?—and that is wisdom; and only in exchange for this and in company with this is anything truly bought or sold, whether courage or temperance or justice. And is not all true virtue the companion of wisdom, no matter what fears or pleasures or other similar goods or evils may not attend her?"

—*Socrates (in Plato's Phædo).*

Chapter VI

HOW TO THINK

"William Forbes had a saying concerning letters; it was, 'Read more and write less.' Meanwhile, according to Bayle, if the man who wrote so much had afterwards come to Forbes and said, 'I have followed your advice; I have read a great deal,' Forbes would then have given this further counsel, 'to read less for the future and meditate more.'"

—*Biographical Dictionary*, 1798.

"Aristippus, being asked what philosophy had taught him, replied: 'To live well with all the world and fear nothing.' Asked wherein philosophers differ from other men, he said: 'In this—that if there were no laws they would still live as they do.'"

"He who has a taste for every sort of knowledge and who is curious to learn and is never satisfied, may be justly termed a philosopher." —*Plato.*

VI

HOW TO THINK

A DISTINGUISHED editor, who had known most of the celebrities of his generation, once told me his impressions of Henry Ward Beecher. "There," he said, "was a man who knew more than all the others, yet who never seemed to work to acquire his knowledge. Beecher seemed to know things by intuition; to imbibe information by occult processes."

Impressed by the wonderful personality of the great preacher, my informant was, I think, more than half serious in this estimate. But of course no sober analyst could accept the estimate at its face value. One hazards nothing in asserting that Beecher, like all the rest of mankind, could have no veritable knowledge that did not come to him through the ordinary channels of sense. To think the contrary would be to harbor a mischievous belief. Few things are more certain than that the highest minds and the lowest are compounded of the same elements and held subject to the same laws of action.

The illusion of intuitive knowledge, in a mind like that of Beecher, grows out of the fact that such minds are exquisitely sensitive to impressions, receiving sensations as it were by an instantaneous process, and compounding them into ideas with like rapidity; then associating these ideas into wide systems of comparison.

In other words, such a mind is essentially synthetic. It tends to be interested in noting resemblances between unlike phenomena. Reasoning from analogy, it passes swiftly from the known to the unknown and draws logical inferences that are so near the truth as to seem like inspirations.

But in reality such reasonings are only logical guesses. The more comprehensive and the better balanced the mind, the more likely are the guesses to prove true; but at best they can never rise above the plane of speculation. The epoch-making thoughts of the world, the time-defying images, are developed and worked out along the same lines that the brain of the veriest plodder follows in its daily humdrum tasks.

If it were otherwise; if genius cut free from the mental processes of mediocrity, we could not follow it; its conceptions would be to us but simple madness, absolute incoherence. But as it is, the greatest mind sees but a little farther than its fellows into the darkness beyond the bounds of knowledge. The revolutionizing idea is but a step away from hosts of ideas that have failed to revolutionize. The aggregate mind must be prepared to follow closely or even genius cannot lead. Indeed, the greatest genius is only the best exponent of his time. Homer is Homer because the Epic was the natural voice of his age.

Consider in this connection the most revolutionary thought of our own time. It is the idea of evolution. Who can say that word and not think of Darwin? Yet Darwin himself would have been the last to claim that he originated the idea of evolution. The idea was as old as Anaximander the Greek, perhaps even older. Even "natural selection," which is the idea usually spoken of as Darwinian, had been advocated, as Darwin himself points out, long before he published his *Origin of Species.*

Lamarck had been the avowed champion of Evolution fifty years before. But the world was not ready. Darwin came when the labors of the new school of geologists—Hutton, Lyell, William Smith, Cuvier, and their followers—had created a new atmosphere and prepared the way for a new view of animate creation. Altogether similar is the history of the greatest scientific discovery of the eighteenth century—Jenner's discovery of vaccination. The truth which Jenner demonstrated to the world had been vaguely known for generations in the farming communities of England. It required the patient researches of a logical thinker to find the way from vague popular belief to scientfiic theory and demonstration.

These, along with many other discoveries that have placed their demonstrators on the highest rolls of fame, do not of necessity involve extraordinary quickness of perception, phenomenal retentiveness of memory, or unusual capacity to associate ideas. Many a man unknown to fame has had more acute perceptive faculties than Darwin or Jenner; countless men have had better memories; countless others have had equal powers of logical thinking. But these native powers have availed them nothing, because they did not supply their minds with adequate material with which to work. Darwin's theories would have been laughed to scorn by the scientific world had he not fortified them with a vast accumulation of facts. All the logicality of his mind would have availed him nothing, had he not found the material with which to work,—such material consisting in this case of an encyclopædic knowledge of the facts of natural history in all its departments. Similarly, Jenner's opinion as to the preventive powers of vaccination would have received scant credence, had it not been supported by a large array of experimental evidence. It was a skein of facts which his logical brain wove into a fabric of truth;—without these facts no powers of mind could have availed.

The first practical lesson of all this seems to be that the mind, in order to become an efficient thinking-machine, must be properly fed. No man is wider than his experiences; but, fortunately, the word experiences in this sense includes not merely the practicalities of life, but our contact with the larger world, through the medium of books. Until man learned to store his thoughts through the aid of the art of writing and to transmit them down the ages through the medium of books, each generation must have been obliged, for the most part, to live in the present, and the progress that comes of cumulative experiences was much restricted. Historical investigators are agreed that the mere memory of man, unaided by written documents, scarcely transmits a record of events with any considerable measure of historical accuracy beyond a period of two or three generations. That is why the early history of Greece and of Rome, as of all other civilised nations, remains so vague and mythical; and why uncivilised nations, lacking the art of writing, have no history at all in the proper acceptance of the word.

Of course, it would be absurd to deny that progressive ideas may be passed on by word of mouth from one generation to another. Through this means alone a certain progress is possible; and indeed it is axiomatic that man must have struggled forward with this aid alone until the art of writing was developed,—albeit such modern investigators as Arthur Evans are disposed to think that this stage of progress was reached much earlier than has hitherto been believed. Mr. Evans, indeed, suggests that man may have learned to transmit ideas by a crude picture-writing before he even acquired the power of articulate speech. I cannot agree with this opinion, and this is not the place to discuss it; but at least the idea is full of suggestiveness.

In any event it requires but a little reflection to show how relatively narrow the vision of mankind must have been, so long as no word beyond a vague oral tradition could be passed on from the great minds of the past to the aspiring minds of later generations. Imagine, if you please, what the world to-day would be like, were all its wealth of books to be suddenly destroyed. Probably the aggregate memories of all the persons living to-day could not reproduce more than a small fraction of even the classics of literature. Even if here and there an exceptional memory could reproduce a masterpiece, consider how soon that masterpiece would become altered and perverted as successive hearers—denied by hypothesis the capacity to write down what they heard—passed it on to one another. And then consider the vast mass of useful knowledge not comprised within the scope of classical writings—matter which no one now commits to memory, because the written page embalms it securely, and which must therefore be utterly lost were the treasury of books destroyed.

Something might be said, to be sure, on the other side, regarding the chaff that would perish with the grain. Not all the matter embalmed on the printed pages is worth preserving. Doubtless, the destruction of much of it would make for progress. Along with the pearls of thought are countless false jewels. There are false ideas commingled with the true. There are lies and superstitions that threaded their way into the mesh of human thought, the perpetuation of which does not make for progress. But few will contend that these false ideas for a moment counterbalance the great mass of useful and inspiring knowledge that finds preservation in books; indeed, even to suggest this phase of the subject is to bring forward an idea almost too whimsical for our present serious purpose. And, even were the dross greatly in excess of the pure metal, the treasure-house of books would still be only on a par with the storehouses of nature;—there is but here and there a grain of gold in a mass of sand, yet that grain is well worth searching out.

Perhaps indeed it is as well that the mental treasures stored in books require some searching, for in hunting them out the delver will acquire valuable lessons in discriminative judgment. Something at least as to his own requirements, each man must find out for himself. He may indeed accept the verdict of the critic as to what constitute the great classics of literature, but no critic can tell him which ones of these will supply the pabulum which his mind most needs. This he must find out for himself by patient searching. As he browses among the books he will find that this author or that is to him stimulative, helpful, thought-provocative. You may find such stimulus in Marcus Aurelius, in Emerson, in Thoreau; your neighbor may search the pages of these writers in vain, yet may find what he needs in Plato, in Kant, or in Spencer.

Search for yourself until you find the words that are written for you. Take no man's verdict in advance;—you will know your master when you meet him. But search widely and ever expectantly. Beyond all question there are hundreds of pages written expressly for your eye that in the maze of literature you will never see. Now and again, by sheer accident, as you browse and as you turn the pages of obscure books in the dustiest corner of a library, you will come upon words that have been awaiting you perhaps for centuries; words that will lift you away from your former self, giving you joy in the present and inspiration for the future.

As one stumbles sometimes upon a receptive and sympathetic mind in a chance travelling acquaintance, so here in a chance book you will have found a new friend who can be to you always a guide and monitor, who will by no chance desert you, and who will respond always to your every mood.

All this would be denied you were it not for books;

all this you have denied yourself if you have not learned the art of friendly searching of the printed page. It is not too much to say that you cannot hope to learn to think if you do not first learn to read—by which I do not mean merely learn to turn the pages as a task; a reader is not one who merely knows the words; he is one who goes to the printed page with eager avidity. Nothing is so stimulative as contact with great minds, and he who denies himself that contact cannot hope to develop his own mind to the full extent of its possibilities.

You have heard it said, perhaps, that Herbert Spencer, the foremost thinker of modern times, read but little. Do not be deceived by such a statement. Open the pages of Spencer's books; read *First Principles*, *The Principles of Biology*, of *Psychology*, of *Sociology;* turn then to the ponderous *Descriptive Sociology* made under his supervision—and you will not need to be told that the man who produced these works was a reader as well as a thinker.

When Spencer said that he did not read he meant that he was not much versed in the literature of philosophy or in any field of popular classics, and that he virtually ignored the current literature of his day.

But these were not the things that his mind needed. He had thought out the great all-encompassing principle which he believed could be applied as a unifying thought throughout the entire domain of human ideas. To prove his case, to elaborate his philosophy, he needed to make his mind a vast storehouse of tangible facts. He did not so much need the thoughts of the ancients or of any generation of his predecessors, as he needed the new facts supplied him by contemporary science. So he ignored the one and eagerly sought the other. Life-long habits of contemplation, and generalising capacities of a vast order, enabled him to dispense with the full knowledge of the ideas of his predecessors; yet critics are not lacking who contend that Spencer's would have been a far better rounded and more permanent contribution to the history of thought, had he read more widely. But, be that as it may, you surely cannot afford to follow his example in this regard, unless you can first assure yourself that you have his native powers of generalisation—and if such you have, you need no mentor in the art of thinking.

The art of reading once acquired, it then becomes no less important to know what use to make of the knowledge that comes through books. You must surely read in conformity with Bacon's classical maxim, "to weigh and consider." You must classify your knowledge and store it, as it were, in the various compartments of your mind, else it will never be available when you need it. Yet, on the other hand, you must beware the dangers of mere idle musing. One chief purpose of reading is to give you material for independent thinking. The stimulative thought is useful just in proportion as it sets up new chains of association in your mind, broadening your horizon; but you must not mistake mere day-dreaming for new and creative thinking.

Learn to stand sentry over your wandering thoughts and from time to time to challenge them. If you find yourself day-dreaming, focalise your attention on the idea that is pictured in your mind at the moment, and then, reversing the mental process, follow back, asking yourself what idea preceded and suggested the present one, and again, what was the one a link farther removed, and so on and on until the chain breaks. You will find that you have come to your thought of the moment by a tortuous path. In retracing your steps, you will gain a lesson in the association of ideas. You will strengthen your memory and add to the potential thinking capacities of your mind. You will learn presently that no process of thinking is worth while that does not lead to some precise goal; and you will be amazed to find to what extent you are able, through precisely "intending" your mind, to add to the range of your mental vision.

Newton expressly declared that he made his discoveries by thus "intending" his mind toward a desired goal; and it is self-evident that such discoveries as those of Harvey, of Jenner, of Darwin, could not possibly have been made in any other way. Even in such alien fields as the domain of the poet, quite the same thing holds true. Not many verse-makers have taken the world into their confidence as Poe did, laying bare the mere mechanical process of literary construction; but you have only to read even the most "inspired" imaginings of a Keats, a Shelley, or a Tennyson, to see that wide reading and calm analytical thinking made possible their work, whatever the "fine frenzy" with which it may at last have bodied forth. That classical poems give such scope for editorial annotation is evidence of the wide range of mere facts, with the aid of which the most far-reaching imagery is brought into being.

If, then, we admit the value of knowledge as an indispensable aid to thinking, it scarcely requires argument to show that such knowledge will be of value in proportion as it is real and not spurious. And this suggests the selection of materials presented to the mind; in other words, the action of selective judgment. The faculty of mind thus designated is a complex one. If anywhere I were to admit the all-importance of natural endowment I think it would be here; for my experience has led me to feel that judgment is to a large extent inherent, and consistent in its action throughout the life of each individual. I have seen children whose judgment regarding almost any topic that can be brought within their comprehension I should prefer to that of a good many highly educated men. The very phrase by which judgment is designated in every-day speech—"common sense"—is suggestive of its native character. It is "common" sense in the fullest inclusiveness of the word. Wild animals show a goodly measure of it. Our remotest pre-historic ancestor must have been largely endowed with it; so must the successful members of each successive generation of his descendants, so long as the hard conditions of savagery, barbarism, and early civilization obtained. It is the pampering conditions of the higher civilisation that have allowed this endowment to become impaired. But even now the successful men possess it in large measure; and indeed its possession is a sure guide to success. Without it all knowledge becomes more or less formless and futile; with its guidance, even small knowledge may accomplish wonders.

I have just said that this matter of common sense or judgment is one regarding which individuals differ vastly. I have suggested that some children possess it in marvellous degree, while some learned men lack it quite as marvellously. It follows that the mere acquisition of knowledge does not necessarily lead to improved judgment. What, then, can be done toward the acquisition of so desirable a trait? I must not pause here to discuss at length so large a topic. But one fundamental rule may be laid down as a sort of chart for guidance. It is this: subject your judgment to the test of comparison; let experience teach you. After all, that is the only true test. The tree is known by its fruit. Study the people about you; observe their actions and note the character of their decisions. You will find that certain men of your acquaintance seem almost uniformly "lucky" while others are almost as uniformly "unlucky." The former succeed in what they attempt; the latter fail. But the word "lucky" as thus applied is a misnomer. The man who is "lucky" throughout a long series of transactions is assuredly the man whose judgment on the average is better than that of his fellows. The habitually "unlucky" man is the man who lacks the all-essential elements of common sense, about which we are talking.

Study the successful man, then; note the character of his decisions as applied to the particular conditions in which he is placed, and you will gain valuable lessons in selective judgment. Similarly analyse your own decisions, as tested by their results, remembering that the best judgment sometimes errs, but that good judgment does not permit the same error over and over. All such analysis, it may be added, is but a special case within the general rule of being guided by experience.

Most of all will you benefit if you have opportunity to generalise this rule by taking specific training in some department of experimental science,—such as bacteriology or physics or chemistry. When, for example, your training in the laboratory has enabled you to take a minute quantity of some chemical and pass it through one process after another, producing it now in solution, now as a salt, now as a fused metal, now as a compound; returning it at last, perhaps after days of manipulation, to its original state—the same in quantity to the thousandth of a grain, as before, nothing more, nothing less;—when you have learned to make such a manipulation as this you will have taken a lesson both in accuracy of method and in severe logicality of reasoning from cause to effect, which will be far more valuable as a mental method than any mere knowledge of chemical processes involved in your study. Here, indeed, as I see it, lies the real value of scientific training. The student who at the end of such manipulation as I have just outlined, finds that his chemical has lost the thousandth of a grain or so, knows that there is no question of "luck" involved in that. He has carelessly spilled a drop or two of one of his solutions, or he has failed to rinse out the last dregs of a beaker.

And as here in the laboratory, so in the great game of life, in the long run there is no such thing as "luck."

A hundred tosses of the coin, a thousand even, may show a preponderance of heads or of tails; but ten thousand throws or fifty thousand will strike the balance. When the business life of any man numbers its decisions by the tens of thousands, mere chance might make half the decisions right, but "luck" will come to the man whose judgment gives the preponderance to the right decisions as against the wrong ones.

It is the province of judgment, then, to test ideas. Judgment will temper creative imagination, holding in check visionary flights and the over-exuberant play of fancy. It will teach us that good ideas to have value must be clear and explicit,—must be susceptible of lucid expression. It will guard against the mistake of confounding obscurity with profundity of thought. But we must not forget, on the other hand, that the use of this selective faculty has its dangers. In some cases it may produce over-caution and so hold us back to timid conservatism. There is, for example, a school of modern historical critics that suffers from this fault. Its votaries temper all accounts of past events with qualifying clauses. They would reverse and modify the verdict of history regarding almost all the noted characters of the past. They would have us remember that after all Nero was in many ways a good ruler; that Marcus Aurelius was not so much better than his contemporaries. They see in the Crusades a great colonising movement with which religion after all had not much to do. They are not quite sure that William the Conqueror accomplished a very sweeping victory at Hastings; or, at least, they explain away the genius involved in the victory. They give us a picture of Napoleon that leaves the reader with a feeling that after all this was rather a mediocre man.

But you will do well to fight shy of this over-cautious criticism, if you would not hamper your imagination. You may safely believe that, in the main, the large figures of history have been painted as posterity will continue to think of them. You will do well to recall that ideas are not good simply because they are new, and you may safely shun the guidance of the historical critic whose iconoclasm is but the measure of his narrowness.

But while admitting this, we must also admit that the past transmits to us a multitude of false ideas, and in particular a tissue of false methods. Indeed, the greatest foes to progressive knowledge are the prejudices and pre-conceptions—heritages from the past—which bias the mind and, like imperfections in a mirror, distort the image it reflects.

That you may free your mind from such bias, it is well now and again to say to your *alter ego:* "Come, let us reason together regarding the faith that is in you. You believe thus and so;—but why? In religion you are a Catholic, an Episcopalian, a Methodist, or perchance a Mohammedan or a Buddhist;—but why? In politics you are a Republican, a Democrat, or a so-called Independent;—but why? Is it that you have reasoned out the pros and cons of each belief; that you have clearly weighed the evidence on every side, so that your verdict has all the force of a wise judicial decision? Or is it that you inherit your beliefs as you inherit the color of your hair and eyes? Are you a

Christian because you chance to be born in Europe or America, and for no better reason? Would you with the same unquestioning faith have accepted the tenets of Islam, had you chanced to be born in Western Asia? Are you a Republican because your birthplace was Massachusetts? A Democrat because your parents live in Georgia? Or is there in the case of each of your beliefs some principle involved that appeals to you—you, an intellectual being gifted with the power of choice—as a convincing force?"

As you stand thus face to face with yourself, exercising this wondrous privilege of challenging your own mind, are you pleased with the answer? Does the response give you warrant for saying that your mind is a "cold, clear, logic engine"; or does it suggest that your alleged reason is after all only the pitiful image of a chance environment? Are you able to say with pride that you have worked out your mind's salvation until it stands forth untrammeled from amidst the crude superstitions, the false pre-conceptions, the absurd, incongruous, contradictory beliefs that have come as a heritage from a past that would shackle the present? Can you claim even in a limited sense that you are a free mental agent? But if not, there should be for you no joy, but only humiliation, in the reiteration of that ecstatic cry of Descartes: "I think, therefore I am." For you do not really think. Your brain serves merely as a cobwebbed structure, on which may settle a little of the dust of ages. Your mind serves as little the uses of a progressive body-politic as the remotest cobwebbed, dust-laden garret serves in the domestic household.

Yet beyond peradventure, your mind has better possibilities than this. If you will but make the effort to clear out its dusty chambers, you can in due time make it a treasure-house of ideas. If you will challenge your prejudices and resolve to be no longer their slave, you may come to be indeed a reasoning being and not a mere thinking automaton. If you will cultivate an interest in points of view and aspects of life that you have hitherto antagonised, you may develop unsuspected creative powers; for in the last analysis sympathy is the mother of imagination. And when, even in the smallest way, you have known the joys of creative thinking, you will have shared in some measure in the sublimest privilege that nature has vouchsafed to man; you will have grown away from your former self; you will have found new meanings in life; stage by stage you will have risen "on stepping-stones of your dead self to higher things" than you had hitherto conceived.

"Those who know not wisdom and virtue and are always busy with gluttony and sensuality go down and up again so far as the mean; and in this space they move at random throughout life, but they never pass into the true upper world; thither they neither look, nor do they ever find their way, neither are they truly filled with true being, nor do they taste of true and abiding pleasure." —*Plato.*

Chapter VII

THE WILL AND THE WAY

"Happiness is no more than soundness and perfection of mind."
—*Marcus Aurelius.*

"There is no thought in any mind, but it quickly tends to convert itself into a power and organizes a huge instrumentality of means."

—*Emerson.*

VII

THE WILL AND THE WAY

THE will is the rudder of the mind. It does not propel, but it does direct. The man that has not attained stability of will power—fixity of purpose—is like a rudderless ship. He is a human derelict in the vast purposeful ocean of life. He must drift hither and yon with each chance current. Unable to stem the tide, he must go with it, though it carry him on the shoals, dash him ruthlessly among the breakers, or sweep him into pitiless maelstroms. It is will power and will power alone that can guide him away from these dangers, enabling him to defy the chance current, to breast the tide, to guide the bark of life into remote, predicted harbors.

In other words, it is will power alone that can assure success in any field of life. An organism that lacked this faculty must be purely passive, purely receptive. Perception, memory, association of ideas might furnish it the materials for self-consciousness. It could feel, remember, imagine, reason; but it would exist for itself alone. It could never make its conscious existence manifest. It could merely harbor the impressions that came to it, giving nothing in return.

The actual mind, on the other hand, is essentially reactive. The same organism that is the medium of entrance of impressions is also the medium of response. The character of the response is simplicity itself. It consists in a readjustment of the molecules of the protoplasmic body, by which is effected a motion of that body as a whole. In higher forms of life, we speak of this as muscular contraction. The only tangible thing that the highest mind can accomplish in response to any impulse, is to bring about the contraction of the muscles of the body with which that mind is inseparably linked.

The responsive capacity of mind is therefore in its elements as simple as the receptive capacity. But the results, in the one case as in the other, become marvellously complex. The simplest organism responds directly and immediately to every impulse that impinges upon it. But the higher organism, receiving a multitude of impulses momentarily, could not possibly respond at once to them all; so it develops the capacity to restrain some responses, storing the energy that would go to make up these responses or deflecting it into another channel. Thus some responses are prohibited while others are increased beyond their normal degree of reaction. This inhibition on the one hand and direction on the other is the work of volition. The first part of its function is quite as essential as the second, though this is not infrequently overlooked by the analyst.

This power of volition, then, in its developed form, comes to take its place not strictly on a plane with the other mental capacities; but rather to sit above them, holding the whip hand, and determining what sensations merit a response, and what particular forms of combined ideas shall be permitted to have outward expression through the muscles. When it has decided, its mission is, as it were, to unbolt the door in a certain direction and let some of the accumulated energy escape. It can originate no energy, can add nothing to the power of the response that the original impressions have generated. The organism can give back no energy it does not receive. But, as has been said, accumulated energy from inhibited responses may be directed into one channel with such force as to have the effect of generated energy. Our every-day conduct is full of illustrations. Most of our complex actions take place in response to stimuli that in themselves are insignificant, but which gain importance through associated implications; as when the housewife, seeing a speck of dirt, responds by scrubbing the entire house.

It is plain, then, that this Volition is the master upon which depends the entire question of the mind's active relations with its environment. And—what is more important—it even enters into the passive or receptive functions also, in that it can decide as to such movements of the organism as shall make the impingement of new impressions possible. In comparison with such power, the other capacities of mind seem to dwindle. This seems to be the domineering, the all-important capacity. Of what could it avail that the organism is intrinsically of the most sensitive; that its impressions are fixed by memory as if graven in marble; that its associations are wide and intense and clear and logical—if volition refuse to let them properly respond, or decline to allow the organism to be placed where new data can come to it through the senses?

This is precisely the rock against which the largest number of brilliant minds are wrecked. Most of us can recall some college companions who were conceded to be of superior mind—receptive, tenacious of memory, brilliant in associational power—who went out to flat failure in the practical world, misdirecting their energies, dissipating them over wide fields to little purpose, never finding the right niche in life. Any one of these men, had he directed his energies into a single channel, holding himself to a single path, might have accomplished wonders; but the very receptiveness of his mind was his doom. It showed him glimpses into wide fields, suggested devious paths of life; and volition faltering, wavering, turning this way and that to little purpose, let energies that might have sufficed for great things be frittered away in unconcentrated efforts. And meantime, perhaps, the dull unreceptive lad who was the butt of the class has gone ahead, directing all his energy into some certain path, until at last he has come to heights that seemed far beyond his strength. His was the "genius of accomplishment."

In speaking thus, I may seem to confound volition with judgment, but such confusion is apparent only. Judgment is the last step of reason that precedes volition, hence the two are in close alliance, and it is sometimes difficult to keep them clearly distinguished. But I am referring now to cases in which judgment is good, but in which its decisions are not carried out by volition. Of course there are countless cases in which judgment itself is at fault, but these do not concern us now. In the cases I have in mind there is no defect of reasoning power. The judgments reached are clear and logical; but volition does not support them.

Let me give a typical illustration from every-day experience. An ambitious young man determines to make himself master of some particular branch of knowledge, which judgment tells him will be of use to to him; he determines, let us say, to acquire a foreign language. He enters upon the task with enthusiasm, studying several hours the first day and perhaps as much each following day for a week. Then something interferes, and he skips a day or two. His enthusiasm begins to wane; and by another week he has given up his task altogether for the time being. For six months he fails to look in his books at all.

Now here there has been no change of judgment whatever. The young man is just as fully convinced of the desirability of mastering that language at the end of the six months as he was at the beginning; perhaps this realisation has grown upon him, rather than decreased. Probably he makes some new resolutions, and "begins over." But he merely repeats his former experience. And very likely at the end of ten years the desire to know that language is just as strong as ever, and the accomplishment not much greater than it was at the end of the first week's study; a dozen starts and as many relapses having been made in the meantime. I submit to the opinions of almost any competent observer whether in his experience far more failures in life have not been due to such volitional inconstancy as this than to defective faculties of perception, recollection, or association.

But, on the other hand, the person gifted with volitional constancy is bound to win. Such a one starting out to learn the language lets nothing interfere with his purpose. At the end of a week he may not have gone half as far as the other student has gone. But at the end of ten, twenty weeks he is still plodding on. When six months are gone he is still giving just as many hours a day to his task as when he began. Presently he has added that language to his stock of knowledge in such form as to be available for his purpose; then he is ready for new conquests.

Of course I use the illustration of the language only as a symbol. The man who falters and vacillates about the language will similarly falter about all the serious tasks of life; the other will as surely work on faithfully and steadily towards his desired goal. The first, though "brilliant," will fail of great accomplishment; the other, though "dull," may achieve great results in the battle of life. Perception, memory, and association are the brick and mortar; volition is the builder. And with mind as in the material world, the finest brick and the best mortar make but a shapeless mass of useless material until placed in position by the master builder. Or, to adopt yet another figure, it may be said that volition is the king of mind. The other faculties are the subjects. With their aid the king wins his battles, but without the king the subjects can do nothing. What were Napoleon's finest army without Napoleon?

The lesson of it all is that he who would become an able man must strive to gain volitional control over his faculties. A good king will have good subjects, and he whose volition has been trained to act firmly will find the other powers of mind increasing as the power of will increases. Most men have sufficient capacity of perception, memory, and association to accomplish great things in this world if these powers were properly directed. It is a familiar comment of educators that an hour a day given to almost any single subject will make an ordinary man learned in that branch of knowledge in a lifetime. But few men find themselves able to give that hour a day, even though the thirst for knowledge be strong upon them. They lack stability of volitional guidance.

The chief purpose of schooling is to supply this defect. The colleges are important not so much because of what they teach, as because they train volition so that in future it may be an ever present teacher. This is what is implied by the "mental discipline" of an education. Of course the other faculties are also developed *pari passu*. Perception is sharpened, memory becomes more reliable, comparisons of ideas become wider as more material is supplied for them; a degree of general culture is attained. But the chiefest thing is the degree of volitional stability that is gained.

And this is one reason why the brilliant student, who has to study but little to keep ahead of his fellows, so often comes to naught in the world. He has acquired little volitional discipline, because little effort was required to keep the average pace. The dullard, on the other hand, having to struggle hard to keep in sight of his fellows, gained the most valuable accomplishment of all, a trained power of application.

This is by far the best prize that any student can carry from college halls.

One reason why men of genius so often fail to profit by college education is that they possess inherent powers of application along the lines of a strong native bent, and the college curriculum cripples rather than aids their volitional powers, by diverting them from an already fixed purpose. "Thrice happy," says Emerson, "is the man who is born with a bias for some pursuit that finds him always in employment." Why? Because he has an inherent volitional impulse toward a definite goal.

The man who is not born with such an inherent predominating impulse must develop such an impulse if he would succeed in life. It is to this end that a proper environment in childhood is so important. A properly educated youth begins the battle with a developed power of volition that almost insures success.

But failing of such education—and many a college graduate does so fail—what can be done to make amends for the deficiency by self-culture? Surely the will cannot strengthen itself by willing to be stronger? Not directly, it is true; but indirectly it may, through the agency of the body with its habit-forming tendency. Persistent willing in one direction is after all only a habit of mind fully established. And habits, mental or physical, are formed by action and by action only.

Physical habits all have a mental counterpart, and when the body has been trained to almost automatic action in such lines as shall tend toward the desired goal, the will has been enormously strengthened by the withdrawal of the bodily inertia that is often one of its worst opponents.

A disciplined mind can reside only in a disciplined body. And discipline is difficult. The body tends to seek the line of least resistance. This is seldom the line of progress, but rather of degeneration, of recurrence to a primitive type or condition. Body and mind must be trained to seek the right lines of action, and only when these right lines have become in any individual case the lines of least resistance—the easiest action now coinciding with the best—has culture been attained.

Most people, as I have said before, go a lifetime without ever learning properly how to arise in the morning, though they practise rising every morning of their lives. Habits of sleeping should be such that when the organism has had required rest it cannot without effort recline longer. Arising in the morning should be the easiest and most spontaneous of habits. One should find himself spontaneously standing by the bedside, almost coincidently with the return of consciousness. Emanuel Kant arose at precisely the same minute each day for thirty years. But most people either drowse away the best hours of their lives in bed, or else drag themselves out with ever recurring difficulty. And their day but repeats the experience of the morning.

We should be driven automatically to our work at a given hour, instead of taking it up grudgingly and intermittently. And this should apply to mental work as well as physical. Most successful artists and authors even, learn this lesson finally, and, instead of waiting for inspiration, drive themselves to the task at a given time, and grind away regardless of desire for rest till a reasonable work is done. *Non dies sine linea*—no day without its line—is the rule that has produced the major part of the world's best literature in every generation. Finally the habit of beginning at a certain hour is fixed. Then it is easy to work at that time; the inspiration comes without the seeking; and the genius of accomplishment has been acquired. Practice brings improvement at least if not perfection; but the practice must be persistent and uninterrupted while the habit is forming. The will must battle steadily against bodily tendencies. Gradually, however, as the body is driven regularly to its task, it begins to acquire the habit of seeking the task. At last it aids the will instead of hindering it. Then comes efficient, frictionless action.

Thus supported, tested, rationalized, with ambition for the motive power, that rudder of the mind, the will, can surely guide you to success in life. Success or failure must be the final test of your ability;—not of necessity success as the world usually counts it, but successful striving toward some goal that you in your sanest moments think desirable. And in being guided to such a coveted goal, you have been guided also to one gateway of the domain of happiness.

Chapter VIII

SELF KNOWLEDGE

"Irresistible power and great wealth may up to a certain point give us security; but the security of men in general depends upon the tranquillity of their souls and their freedom from ambition." —*Epictetus.*

"There are two sentences inscribed upon the Delphic oracle, hugely accommodated to the usages of man's life: 'Know thyself,' and 'Nothing too much'; and upon these all other precepts depend." —*Plutarch.*

VIII

SELF KNOWLEDGE

ELIHU BURRITT, "the learned blacksmith"—himself a marvellous example of the power of application—used to deliver a lecture entitled "Poets made, not born." All the arguments of the preceding chapter might be said to sustain this thesis. But it would be absurd to deny that, after all, every man is born with certain limitations, no less than with certain capacities. Not every man, if he were to labor assiduously from childhood, could learn to paint the "Last Supper" or the "Last Judgment" or to write "Hamlet" or "Faust." The man that tips the scale at one hundred and twenty pounds must not enter the athletic arena with a Hackenschmidt, a Gotch, or a Jeffries; and the mind has its definite limitations no less than the body, even though they be less tangible.

With wisdom, then, may we heed the symbolic warning of the Greek sculptor Eunus, who is said to have graven near an altar not Hope merely but also Nemesis,—"the former that thou mayest have hope, the latter that thou mayest not hope too much."

Of similar import was the symbolism of the old Greek temple that bore over its successive doors the legend "Be brave; Be Brave; Be Brave"; but, as a curious anti-climax, over the last door "Be not *too* Brave." And there was sound philosophy in the seeming paradox. There is a time when seeming courage becomes mere foolhardiness; there are limitations beyond which the wise man will not strive. There are goals which every man of ordinary endowment must admit to be beyond his reach.

It becomes then a practical question for every individual as to what are the proper limits of his ambition.

There is but one way to decide this all-important question, and that is embodied in Thales' maxim, "Know Thyself." Study your own peculiarities and capacities of mind. In particular compare your own mental attributes with the attributes of those about you. Otherwise your studies will avail nothing, for you are sure to become the victim of self-illusion. Your self-analysis will cause you to emphasise such traits as you desire to possess, and you will visualise yourself as a far different being from what you really are.

The only real test is the practical one of comparison with others. Just as the would-be champion athlete tests his powers with one competitor after another until finally he finds his level, so you must test your mind against the minds with which it comes in contact until you too know your place. There is more unhappiness in the world because so many people fail to find their proper niche in life than for almost any other single reason. It is not by any means exclusively the case that people aim too high; there are many who from over-modesty aim too low. To these quite as much as to the over-ambitious it will be of advantage to test out their capacities and to learn to know the real measure of their potential abilities.

The test of your capacities begins to be made even while you are at school, but the decisions of the schoolroom are not to be taken as final. Many a youth with small aptitude for book-studies proves an efficient worker in the field of business, so soon as the chance offers. But such cases are, after all, somewhat exceptional. As a general rule capacity to succeed in one direction implies capacity to succeed in other directions, —though the element of actual, earnest effort must be taken into account. Some students fail to get on because they do not really try to get on. In any event, your earliest ventures in business or professional life will give clues both as to your capacities and your real interests that should not be lightly ignored.

When these first practical efforts give assurance of ability at all beyond the ordinary, there is one question that comes to a very large majority of youth year by year, the solution of which may determine almost everything, pro or contra, concerning their future happiness. This is the question of village-life versus city-life;—for it may be assumed that comparatively few of the leaders of any generation are born in a city. In our day, as in all previous generations, the country is the birth-place of most men of power. But now as always, few indeed are the men of power who are content to remain in their natal villages, without at least casting wistful glances towards the centres of population.

To most young men, indeed, whatever their mental status, it seems that life is stagnant in the village, and that the city must have the stir and bustle that keep men alive. To the metropolis flock the wealth and brains of the nation. There one must move on or be swept under by the remorselessly progressive tide. There is a fascination about this active struggle for existence and supremacy that appeals convincingly to the active mind of youth. To vaulting ambition it seems that the field for work in any profession in a country village, or even in a smaller city, is so narrow, so self-limited that no strong mind can long endure its trammels.

And there is surely a measure of reason in this view. The world's creative work, has always been accomplished for the most part under the stimulus of city life. Nor may we too lightly decry the ambition that would test its powers where the game is hottest; for after all ambition is the world's progressive lever. "A contented mind is a perpetual feast,"—but who wishes to be forever gormandizing. It is also written, "Enough is as good as a feast." And does not everyone know that hunger is more stimulative, not to say inspiring, than satiety?

There is a stimulus in a gnawing stomach that has been the genesis of all the progress of animate creation. Man would never have evolved from bestiality in a world in which continuous feasting was a practicability. Only when hunger presses does the lion sally forth to seek its quarry. Only when hunger urged did the cave man think of new weapons, new methods of attack, that helped him along the road to civilization. Only when that soul-hunger called ambition gnaws at the brain, does civilized man seek to steer his mental bark out of the doldrums of inane satiety.

We must take heed, then, I repeat, how we too rashly deprecate the ambition that stimulates to progressive action. The world has use for every superior mind. The "mute inglorious Milton" is forgotten and deserves to be forgotten, since he has done naught for which to be remembered. It is the voiceful, glorious Milton, known by his works, whom the world loves to remember. But he himself would never have known his power had he not striven to rise.

So when we see the eager youth from the country casting wistful glances toward the vortex of the city, we must needs hesitate before we declare that he is yearning after false ideals. Most of those that try that fiery contest will beyond peradventure be found wanting; yet now and then there issues from the motley throng a man of genius. According to those standards which Nature has everywhere established for organic beings, this is as much as could be hoped. From the standpoint of world-progress, what matters the loss of the thousands of mediocre minds—what matters the agony of spirit in which their lives are blotted out—compared to the gain through genesis of one of these superior minds? Napoleon's cynical "Canst thou make an omelette without spoiling eggs?" applies no less in struggles of civic life than on the veritable battlefield.

Yet even while we admit all this, and are disposed in the interests of human progress to do obeisance to the great master-builder of civilisation, King Discontent, we may challenge, from the standpoint of our present thesis, the beneficence of over-ambition for the individual. We may scarcely doubt that even though ambition makes for progress, yet contentment makes for individual happiness. At least we may urge, then, that the wise individual will put his ambition to the test of some comparisons, and will hold it somewhat in check, till he has proved his nascent power. Even the eaglet does not soar high in air till it has amply tested its wings.

It may chance that such testing of your wings will convince you, as you gain self-knowledge, that your proper sphere of action is to be found rather in the relative quiescence of the village than in the turmoil of the city. Surely then it will redound to your usefulness in the world and to your individual happiness if you early learn to interpret the verdict of Nature, and adapt yourself to the idea of making the most of what you may be, instead of futilely striving after what you may not achieve. The earlier you attain such self-knowledge, the fuller may be the measure of your self-content.

Desirable though it certainly is, however, to understand your own propensities and capabilities, you should know that there is no more morbid mental practise than that of habitual self-analysis. Some vain and selfish persons are forever dramatizing their woes, and seeing themselves as on a stage. Beware of this particular form of egotism. Judge yourself by the results of your efforts rather than by your pre-conceived estimate of them. I do not suggest, of course, that you try a thing once and, failing, decide that you can never do it. Try again and again; but if you fail after a reasonable effort ask yourself if there be not some other field more adapted to your aspirations. Better a good artisan than a poor artist.

Nor is ambition a sure guide to capacity. Many a person aspires to do what he can never do; indeed it seems as if a large proportion of minds aim in the wrong direction. This perhaps is largely because ambition is so much a matter of propinquity. You will find nine times out of ten that sundry relatives of a literary man try their hand sooner or later at writing, though they had no inherent bent in that direction. It is natural that we should wish to be able to do the things that we see our friends doing. But the desire is illusive. You should strive to live your own life, not merely to reflect the life of another.

And worst of all, if you try to do a thing for which you are not adapted, you will fail to gain the two great keys to success—self-confidence and enthusiasm. How can you be confident about the thing you find hard to do but which your friend does with ease? How can you love a task that you do so ill? But, on the other hand, if you find the task for which you are adapted, your measure of success will give you confidence; confidence will lead to yet keener application, and this to yet greater success. Meanwhile success is the sure harbinger of enthusiasm; and enthusiasm, needless to say, is in turn the sure promoter of unremitting effort. Enthusiasm, indeed, is the very core of creative genius. "Without enthusiasm," says Emerson, voicing the experience of all mankind, "no great work was ever yet accomplished."

Yet even here another word of caution. Be an enthusiast whatever else you are; but put your enthusiasm to the test of common sense. Be sure you are right before you go ahead too persistently. If your effort is one that can find a practical test, apply that test; and do not be afraid to change if you find that you are wrong. The most successful business man I know admits that he makes more mistakes than most of his fellows; but he recovers from his mistakes and gets on the right track in time to surpass his less enthusiastic competitors. He could never do that were he not an optimist and an enthusiast.

But note also that his enthusiasm is tempered by that saving grace of common sense, else he could not recognise his mistakes and retrace his false steps. Without that saving grace, self confidence guided by enthusiasm would lead more likely to visionary fanaticism than to practical goals. Beware that *ignis fatuus*. The task of the reformer is a noble one, but make sure that your reforms are valid.

"There are a thousand hacking at the branches of the tree of evil," says Thoreau, "where one strikes at the root."

Make sure that you not only strike at the root, but that your tree of evil is an actuality and not the mango tree of a conjuror. Remember, as a general proposition, that if you oppose the conventional ideas of society you are probably wrong; for these ideas are the slow growth of the centuries. Yet it is always possible that you are right; but before you can feel sure you must study the past; you must learn what others have thought and said on the same subject.

The chances are that you will find that your new revolutionary idea was discussed by the followers of the early Egyptian Pharaohs, by the magicians of old Babylonia, or, at the very latest, by Pythagoras or Plato. The so-called oldest book in the world, the Prisse Papyrus, dating from Egypt of the third millennium B.C., voices the plaintive regret of an old man who finds that things are not what they were in the golden days of old. Such pessimism, with its heritage of destructive criticism, is the product of every age, and must be taken with due allowance; yet back of it lies at least a half truth.

Make sure, then, that your firm resolve and persistent effort are carrying you toward a fixed guiding star, not toward a will-o'-the-wisp. Make sure that it is true firmness of will, not mere obstinacy, that holds you to your course. For rest assured there is no more monumental exponent of unity of purpose than the fanatic who is the victim of one fixed idea. His persistency may lead him to sheer insanity—to an asylum or prison—yet it differs in no regard from the commendable stability of purpose which I have all along enjoined, except in the one vital essential that it will not bear the scrutiny of common sense. Ample tests were at hand to prove that the fanatic fixed his eyes on a mirage, not on an actual goal; but it was a measure of his fanaticism that he could not accept the tests.

At the risk of a seeming anti-climax, then, I will repeat, "Be brave, Be brave, Be brave; Be not too brave." Temper your enthusiasm with caution. Let self-confidence be based on true self-knowledge. Cultivate firmness of will as distinguished from mere obstinacy. "Hitch your wagon to a star"—but not to an *ignis fatuus.* And though your life journey may not have led you to the heights, yet it may have passed along many a pleasant by-path, showing you, perchance, farther glimpses into the realm of happiness than are usually granted more ambitious travelers.

Part III

SOCIAL ASPECTS OF THE PROBLEM OF HAPPINESS

"So live with your inferior as you would wish your superior to live with you."
—*Seneca.*

Chapter IX

HOW TO WORK

"Deliberate with caution, but act with decision; and yield with graciousness, or oppose with firmness."

—*Colton.*

"The manly part is to do with might and main what you can do." —*Emerson.*

IX

HOW TO WORK

TO-DAY is always with us, and it is proverbial that to-morrow never comes. The present hour alone is our sure possession. Yesterday is dead and gone forever; to-morrow is yet in embryo. The present tense alone expresses reality.

The workers of every age have realized these elemental truths. The phrase-makers of every language have embalmed them in telling words. By universal consent, the all-important time is Now. Yet this truism, like many another equally obvious one, is exceedingly hard to act upon. Contemplative minds are ever prone to builds their plans to-day, but to put off action till that ever-elusive morrow. Meanwhile the arch-thief Procrastination steals the years; and the visionary who lacks nothing but the initial energy to start, finds himself a middle-aged and then an old man, with his work not accomplished, perhaps not even begun.

For it is Father Time's paradoxical jest that though to-morrow never comes, yet still the years roll swiftly on. No skill can retard their flowing; no power can recover so much as one unit hour. No genius can utilize any moment but the present one. To postpone is not to accomplish.

Cousin-german to the procrastinator, in point of unproductiveness, is the man who is forever regretting the past. For to "cry over spilled milk" is no less proverbially futile a performance than to wait on the future. Whatever your mistake of yesterday, you can never undo it. Let it teach you a lesson for to-day; beyond that you can serve no useful purpose by dwelling on it regretfully. Resolve that you will not make the same mistake twice; and begin Now to go ahead in the path that your present judgment indicates as the best one.

Conceding, then, that to-day and not to-morrow is our work-time, what hours of to-day shall be set aside for our task? Shall we work early and late, or only a few hours? And in the latter case, shall our work-hours be those of the early morning or those of the night?

In putting that question, I am assuming, quite obviously, that your task is one that permits you to elect the time of its attempted accomplishment,—the task, let us say, of the artist, the writer, the musician, the striver after artistic success in almost any line; for of course the routine tasks of the ordinary trade or profession must be undertaken in the hours prescribed by convention. Assuming that choice is open to you, what hours may you best select?

The question is one, perhaps, that does not admit of categorical answer, so great is the diversity of custom among successful workers. A good many literary workers are erratic in this regard, turning night into day, and working only after most other people are in bed. At this time, they say, they are undisturbed by obtrusive sounds. Some writers are peculiarly susceptible to disturbing influences, and think themselves unable to concentrate their minds when there is the slightest commotion about them. Pliny the younger tells us that he formulated his thoughts in a perfectly dark room, far removed from any noise. Darkness and perfect silence enabled him, he believed, to arrange his ideas to best advantage; after which he called his amanuensis and dictated what he had composed.

Pliny, to be sure, worked very early in the morning, rather than at night, but in this regard most moderns do not care to emulate him. Yet there can be little doubt that the brain is in best condition for clear, vigorous thinking soon after it comes out of the restful period of slumber. For work that requires sustained logicality of thought, I believe there can be no question that the morning hours are better than the late night hours. On the other hand there is equally little question that the mind tends to become emotionally more susceptible at night, and it is possible that some kinds of fiction-writing may be better done then. But on the whole I doubt whether the time of working has any great effect in one way or another. It is remarkable how consistently the brain maintains a certain level of productivity, regardless of conditions.

In a word, I believe that the alleged necessity for darkness, silence, and the other pampering conditions that so many workers think they require, is for the most part a fiction that they have allowed themselves to impose upon their own minds. A trained mind should be able to withdraw within itself, as it were, and become virtually oblivious to its surroundings. It is said that Horace Greeley could write an editorial in the midst of the roar of a political convention, or seated on a Broadway curbstone, should occasion demand it, as readily as in his office. I suspect that most people could learn to be equally independent of their surroundings if only they would train themselves in the right direction. Indeed, I know some writers who find the roar of a city more favorable to mental effort than the silence of the country; the noise about them seems to wall them in and protect them, if not indeed actually to stimulate their mental processes.

The obvious moral is that you should cultivate the capacity to adapt yourself to your task and your time. You can probably learn to work in town or in country, by day or by night. Do not let yourself be put off with the illusive excuse—which lazy minds so often put forward—that you would do better elsewhere or under more pampering conditions. Even ill health could not curtail the work of a Darwin, a George Eliot, an Elizabeth Barrett Browning, a Herbert Spencer. It is only half-genius, as Hamerton says, that is always waiting for its inspiration. The true worker puts his shoulder to the wheel wherever he finds it. He waits for no inspiration; defers not for favorable time or place; but seizes on the present moment,—and has finished his task before the procrastinator would have begun.

But though you should thus prove yourself master of unfavorable surroundings on occasion, it by no means follows that you should be utterly careless of your environment, if a choice is open to you. It would be sheer folly to deny that environment counts for much in accomplishing any important work,—using the word environment now in its broadest sense. Man is instinctively a gregarious, a social animal. Comparatively little work of value in any field has been accomplished by anyone leading the life of a recluse. And the briefest study of biography will convince you that genius is seldom altogether isolated from genius.

Consider in this regard the producers of the great art and literature and science of any age; note how they tend to form "schools," to cluster about certain geographical centres, to glorify brief epochs. Thus the three great tragedians of Greece, Æschylus, Sophocles, and Euripides, were all residents of Athens in the same generation; so were the three great historians, Herodotus, Thucydides, and Xenophon. Of the philosophers, Plato was the disciple of Socrates and Aristotle the disciple of Plato. Roman literature produced in one epoch Virgil, Horace, Ovid, Lucretius, Cicero, Cæsar, and Livy; and in another epoch Seneca, the two Plinys, and Tacitus. The awakening of Italian literature gave the world in rapid succession the works of Dante, of Petrarch, and of Boccaccio; the awakening of art was attested by Cimabue and Giotto, while its full development was marked by that triumvirate of Florentine masters, Leonardo, Michelangelo, and Raphael.

Modern examples of the same stimulative influence of genius upon genius will at once suggest themselves to every reader. Cases in point, taken quite at random, are the group of Elizabethan dramatists, with Shakespeare and Jonson at its head; the Lake School of poets, including Coleridge and Wordsworth; the mutual influence of Scott, Byron, and Moore, of Goethe and Schiller, of our own Emerson, Hawthorne, and Thoreau.

Even in the case of these men of supreme genius, the influence of contact with kindred minds was notable, demonstrable. How much greater, then, must be the need of such stimulus to lesser minds. In fields of work requiring patient research rather than brilliant insight, this is particularly notable. Gibbon's *Decline and Fall of the Roman Empire*, perhaps the greatest historical work in any language, would probably never have been produced but for the stimulus given to historical investigation in England in Gibbon's early manhood by the writings of Hume and Robertson. George Grote's History of Greece, second only to the work of Gibbon among historical compositions in the English language, was produced almost as a direct answer to the History of Mitford. And in the field of the natural sciences, the effect of propinquity, of mutual influence, is so striking, that Galton names it is as almost an essential prerequisite to the full development of scientific genius.

By all means, then, put yourself in touch with other workers of allied interests and aspirations if you can. From them you will draw an inspiration that you can scarcely gain from any other source. And by them you can measure yourself as you can in no other way.

Not the least valuable lesson of such association with superior minds will be, perhaps, the object lesson you will receive in the value of sedulous application. By association with men of accomplishment, you will soon learn that not even the highest talent can free itself from the thraldom of labor. Everywhere the history of achievement repeats that lesson.

De Maupassant, for example, has told us of his conviction that such effort as he gave to the attainment of literary skill would have assured success in any field. Everyone knows how he served apprenticeship year after year under his master Flaubert before his work was thought worthy of publication. Stevenson's finished product was produced with infinite toil, if we may accept his own statements.

These were cases where success came not through inherent brilliancy of faculty, but through inherent stability of will. But we may hear the same story regarding men of the most brilliant natural endowment. Thus Macaulay, who wrote a universal history when eight years old, used to work for weeks on a single review article when in his prime. Sir Rowan Hamilton was a veritable marvel of precocity as a child, yet he devoted the major part of his life to the development of the system of quaternions on which his fame rests. Darwin gave twenty years of assiduous investigation to his theory of evolution before announcing it to the world.

And nearly all the masters of the elder day were prodigies of industry. Michelangelo painted the entire ceiling of the Sistine Chapel with his own hands,—he himself having in the first place constructed a wonderful scaffolding on which to stand. Leonardo was "zealous in labor above all men" as his multiform accomplishments in diversified fields amply testify. Erasmus contracted in early life habits of application which clung to him so persistently that even in his journeys he could not be idle. He composed his celebrated "Praise of Folly" in a journey from Italy to England, pursuing his theme as he rode and committing his thoughts to writing each night.

Adrian Turnebus, the illustrious French critic, was so industrious that "it was remarked of him, as it was also of Budæus, that he spent some hours in study even on the day he was married." Grotius, thrown into prison, only redoubled his efforts, and when he would unbend simply turned from one work to another. For recreation he translated the *Phenissæ* of Euripides, turned his own famous *Institutions of the Laws of Holland* into Dutch, composed "Instructions" for his daughter in the form of a catechism, and the like.

When Philip of Macedon sneeringly asked Dionysius, Tyrant of Syracuse, how his father found time to compose his odes and tragedies, the reply was: "He composed them in those hours which you and I consume in drinking and play." That other Sicilian, Diodorus, spent thirty years in Rome collecting materials for his history, besides travelling through the greater part of the provinces of the known world. Yet that was when, as it now seems, the world was young; certainly the materials for history that were then extant were scanty indeed compared with those of the present day.

A chronicler of a later day, Gilbert Burnet, author of the celebrated *History of His Own Time*, was obliged by his father to arise at four every morning to begin his studies during his youth; and the habit thus thrust upon him became second nature, and was retained throughout the best years of his life. It was by similar utilization of the early morning hours that Bunsen found time to write his *Meaning and Influence of Egyptian History* amidst the engrossing preoccupations of an ambassador at the court of England.

Dionysius Laertius tells us that Aristotle slept with a brass ball in his hand, which, by falling into a basin of water awakened him that he might resume his studies. The story is perhaps apocryphal, but it serves to illustrate the reputation for unwearied industry that Aristotle held in antiquity; a reputation that accounts, in part at least, for the fact that the Stagyrite's works have come down to us in greater volume than those of almost any other Greek writer; having given their author, meantime, for a thousand years, such an ascendency over the scholarly world as few other men ever attained.

The Aristotle of the Roman world, and the only ancient who could challenge the supremacy of the great Greek in the field of natural history, was the elder Pliny. An authentic account of the habits of work of this remarkable man has been left by his nephew, Pliny the younger. So vividly does it illustrate the power of application, that a transcript of it is worth presenting at length.

It appears that in summer the elder Pliny "always began his studies as soon as it was night: in winter generally at one in the morning, but never later than two and often at midnight. No man ever spent less time in bed; insomuch that he would sometimes, without retiring from his books, take a short sleep and then pursue his studies. Before daybreak he used to wait upon Vespasian, who likewise chose that season to transact business; and when he had finished the affairs which that emperor committed to his charge, he would return home again to his studies. After a slender repast at noon, he would frequently in the summer, if he was disengaged from business, repose himself in the sun; during which time some author was read to him from whom he made extracts and observations. This was his constant method, whatever book he read; for it was a maxim of his, that no book was so bad, but something might be learned from it.

"When this was over he generally went into the cold bath, after which he took a slight refreshment of food and rest; and then, as if it had been a new day, resumed his studies till supper time, when a book was again read to him, upon which he would make some remarks as they went on. His nephew mentions a singular instance to show how covetous he was of his time, and how greedy of knowledge. His reader having pronounced a word wrong, somebody at the table made him repeat it; upon which Pliny asked his friend if he understood it? who acknowledging that he did; 'Why then,' said he, 'would you make him go back again? We have lost by this interruption above ten lines.' In summer he always rose from supper by daylight; and in winter as soon as it was dark.

"Such was his way of life amidst the noise and hurry of the town; but in the country his whole time was devoted to study without intermission, excepting only when he bathed; and this, no longer than while he was actually in the bath, for while he was being rubbed and wiped, he was employed either in hearing some book read to him, or in dictating himself. In his journeys he lost no time from his studies; but his mind at those seasons being disengaged from all other thoughts, applied itself wholly to that single pursuit. A secretary constantly attended him in his chariot, who in the winter wore a particular sort of warm gloves that the sharpness of the weather might not occasion any interruption to his studies."

Such application as this, it is hardly necessary to prove, would triumph against almost any obstacle. Pliny, indeed, had no obstacles placed in his path, so far as we are aware. He pursued the bent of his native talent. But cases are not wanting in which men have achieved fame in fields which nature seemed to have forbidden them to traverse. The case of Demosthenes is so characteristic in this regard that it will bear expositing notwithstanding its familiarity. We are assured that this greatest of all orators of antiquity—if not indeed of all time—had originally "a weak voice, a short breath, and a very uncouth and ungracious manner. By dint of resolution and infinite pains, he overcame all these defects. He would climb up steep and craggy places to help his wind and strengthen his voice; he would declaim with pebbles in his mouth to remedy the defect in his speech; he would place a looking-glass before him to correct the awkwardness of his gesture; and he learned of the best players the proper graces of action and pronunciation. He was so intent upon his study that he would often retire into a cave of the earth, and shave half of his head so that he could not with decency appear abroad till his hair was grown again. He also accustomed himself to harangue at the seashore, where the agitation of the waves formed to him an idea of the commotions in a popular assembly, and served to prepare and fortify him against them. From these several kinds of hardship which he imposed upon himself," concludes his biographer, "it is plain that he was not so much born an orator, but is rather an instance, how far parts and application may go toward the forming a great man in any profession."

Another application of this truth is furnished by the experience of Edmund Stone, the eminent mathematician. "He was a native of Scotland, and son to a gardener in the service of the duke of Argyle. The instructions he received amounted to no more than being taught to read by a servant of the duke's. 'I first learned to read,' said Stone. 'The masons were then at work upon your house. I went near them one day and I saw that the architect used a rule and compasses, and that he made calculations. I inquired what might be the use of these things, and I was informed that there was a science called arithmetic. I purchased a book of arithmetic, and I learned it. I was told that there was another science called geometry. I bought the books and I learned geometry. By reading I found that there were good books in these two sciences in Latin. I bought a dictionary, and I learned Latin. I understood that there were good books of the same kind in

French. I bought a dictionary, and I learned French. And this, my lord, is what I have done,' concludes the narrator simply. 'It seems to me that we may learn everything when we know the twenty-six letters of the alphabet.'"

Such anecdotal illustrations of the power of application might be added to indefinitely, but it is perhaps needless to extend the list. It is scarcely too much to say that the history of every great man reiterates, in some measure, the same story. Opinions may differ as to the share played by such habits of application in attaining success in the case of any individual man of undoubted genius. A Leonardo, and a Michelangelo, for example, have such powers of mind that even a comparatively slight effort must raise them above the level of their fellows,—albeit not to the towering height they actually attain. But I am not so sure that Aristotle and Pliny were men of genius in the same sense. They were men of comprehensive, talented minds, of course; but they plodded into the citadel of genius through the gateway of toil; they did not soar in on the wings of inspiration. Acquired habits of application did for them what inherent brilliancy did for the few favored others. It is such examples that have led to the familiar —even if not all-sufficient—definition of genius as "Capacity to work, or to take pains."

The moral of such lives is: Make yourself a master in one line, "Know something about everything, but everything about something." That is what these men did. That is the object of such application.

But can such habits of application be acquired by everyone? Possibly not; yet after all it is marvellous how quickly a habit may be taken on, and yet more marvellous how persistent it tends to become once it is thoroughly acquired. Indeed, the well-formed habit comes finally not only to aid the will in its original purpose, but actually to dominate the will and keep it loyal to that purpose. A practical illustration of this is shown in the familiar case of persons who start out in early life to acquire a fortune, thinking then to turn from the lines of trade and enjoy the benefits of their early frugality. Habits of self-denial and saving come hard at first; but at last they are "second nature," and when at last the original goal is reached and judgment would say, "Now turn and enjoy the fruits of your labor," Habit says, "No; we will go on as we have begun." The mad lust for more money and yet more, now no longer purposeful, grows and persists while the individual lives.

Similarly, in quite different fields, the same thing holds. Darwin himself assures us, for example, that his years of application to scientific ideas rendered him insusceptible to any other theme; he could no longer appreciate art or music. His mind had become a mechanism solely for the elaboration of scientific ideas.

This inability to shake off a habit that at first was hard to acquire suggests the advantages of fixing the goal in early life where one expects it to remain. The youth is fortunate who, finding at the outset of his career a congenial trade or profession, can say "this is for life" and hold to his purpose. Good habits of work will come, aiding the will. Interest will grow as the horizon widens, insuring vivid presentation. This in turn insures vivid recollection; and wide association of ideas follows as the natural sequel of these two. Thus each faculty aids and stimulates all the rest. A harmonious mental coalition is formed and strengthened. The fortunate individual develops ability that he little dreamed of in the beginning. He may even scale the heights of genius when earlier prognostications would have doomed him to a life of mediocrity.

Considering how volitional power may be developed, and seeing what may be accomplished by stability of will, one may almost feel that every normal mind has such potentialities of genius. Certainly you need not despair because you lack brilliancy of receptiveness. Rather fix your eye all the more doggedly on the distant goal. Resolve that even if nature has made you a tortoise rather than a hare, you will none the less strive to demonstrate unsuspected ability, by winning the race.

And rest assured there are few greater joys than that which springs from difficulties overcome. To have placed a single day of efficient work behind you will tend to give you the warm glow of well-being; to have carried to accomplishment a task requiring months or years of application will insure you satisfaction inestimable. Past labors are proverbially pleasant.

"Do nothing for ostentation, but all for conscience. Seek the reward of virtue in itself, and not in the praise of men." —*Pliny the Younger.*

Chapter X

YOUTH VERSUS AGE

"Happy is he that has well employed his time, however short it may have been." —*Seneca.*

"A man that is young in years may be old in hours, if he has lost no time,—but that happeneth rarely."

—*Francis Bacon.*

X

YOUTH VERSUS AGE

SUPPOSE, however, that a man has striven earnestly and well according to the best of his opportunities and abilities, yet that he has failed, after years of toil. At middle life he realises at last that he made a mistake in even trying to scale the heights in the direction of his effort. Must he then write "Failure" for all time over the portals of his house of life? Is it too late to make amends for his blunder; too late to start over?

The question brings us face to face with the world-old and ever recurring problem of Youth versus Age. It is a problem that confronts us everywhere in every-day life, and which enters into the idiom of our current speech. We are forever being assured that this man is too young for some given enterprise or effort, and that some other man is too old. Moreover our laws reflect the complexion of every-day speech; they declare every individual unfit for the duties and privileges of citizenship until he is twenty-one; they specify that no man may be named President before he has attained the age of thirty-five; and they fix the retiring age for officers of the army and navy at sixty-five.

At first blush this perpetual contrasting of youth and age seems like an effort to establish barriers and contrasts where no such lines of demarcation are drawn in nature; somewhat as the perennial contrasting of the feminine with the masculine mind seems to imply a disregard of the eternal harmonies. But the biologist assures us that the contrasting is not without a certain warrant, in one case as in the other. It appears that every individual, as viewed from the biological standpoint, is the victim of that law of atavism which decrees that each single organism shall tend to reenact in its own life-cycle the history of its race. Thus the child exhibits many reminiscent traits of our early savage ancestors; the young man has the enthusiastic ambitions of a young and lusty nation; the middle-aged man should have the sober and mature judgment of a practical nation in its prime; and the old man may be expected to exhibit the decrepitude of a degenerate nation verging toward the abysm.

So it would follow that to the man in middle life, grown worldly wise, not to say blasé, the ambitions of youth would seem to belong to a period of adolescent and visionary enthusiasm and to partake of the nature of vanity and folly; while to the old man, basking in reminiscence and beset by present infirmity, the world will seem a less pleasant place than it was in days of yore, and the enthusiasms of the new generation will appear as foolish vagaries, departing absurdly from the wise order of the elder day.

And true enough we find it, in any generation, that youth is contemptuous of age and age intolerant of youth; somewhat—to revert to our atavistic explanation—as barbarian and man of culture, brought face to face, regard each other with mutual mistrust, contumely, and lack of understanding.

Every man is the product of his time, and the world is never static. Wherefore it follows that each successive generation must differ somewhat in the atmosphere of its culture from every other generation. The attitude of one generation toward another must then partake in lesser degree of the attitude of one nation toward another; an attitude expressed by the word alien. No man finds himself quite at home, as the saying is, among foreigners; and similarly no man can find himself quite at home except among companions of his own generation.

Familiar illustrations of the truth of this last elementary proposition may be found at once on examining the various companies or cliques of companionship among the individuals of your own community. But the principle, to be of universal application, requires a word of interpretation. It is necessary to understand an important fact which is often overlooked; the fact, namely, that mere age in years is not the necessary and final test of the generation to which any given individual belongs. The phrase "An old head on young shoulders" has its connotations in fact; so too are there individuals who may justly be said to be seventy or eighty years young.

Generally, but not always, is memory so fleeting that the later years bring forgetfulness of the thoughts and aspirations of the earlier ones. Generally, but not always, are the earlier years marked by visionary enthusiasms and immaturity of judgment. Alexander by his own efforts became dictator of Greece before he was twenty, and master of the world before he was thirty. Augustus Cæsar ruled half the known world at twenty-two, and all of it a bare ten years later. Napoleon at thirty had behind him a record of almost unexampled conquests, and was supreme arbiter of the destinies of France, if not indeed of all Continental Europe.

Such men as these, obviously, are not to be judged by their mere years. But, indeed, as just suggested, the year is scarcely an accurate standard of measurement for the life of even the ordinary man. "A man that is young in years," says Bacon, "may be old in hours." Here, then, we have a more rational unit; but unfortunately one that could not well be applied in practice. We cannot well analyse the hours of our fellows, to determine what number of them have been well employed. For practical purposes, the clumsy standard of years must suffice. Perhaps on the whole it serves well enough.

Just where the threshold of senility should lie, in the course of any individual life, it is impossible to predict with precision, so much depends upon complications of heredity and the minor complications of environment. Somewhere along in the forties, let us say, a man is likely to begin to realise, not without a shock of surprise and an impulse of rebellion, that he is no longer young. He is not yet old, surely; is scarcely at middle age;—but he is not young. His hair has begun to change color a trifle; his figure tends to enlarge a little about the waist-line—not the place for muscular development; and he half suspects that he has not quite the initial energy on the one hand nor the physical endurance on the other that he once had. Very likely some of his aforetime ambitions have gone the way of his youth; and if he will hark back in memory to the ideas that dominated him in the twenties, he may feel that in many ways he is a changed personality. Be that as it may, he is the fortunate exception to the average if his ideas on all subjects that interest him are not now fixed beyond probability of change—at least this side senescence. In the current phrasing, his "character" is fully formed.

As a rule, the person thus come to "years of discretion" takes a more conservative view of life than he did twenty years before. I fear that he has generally lost the inclination to learn;—but I certainly should not admit that he has lost the capacity. He is not very likely now to take up any new study requiring diligent application, nor to enter on any entirely new line of business activity. The foundations of his fortune or success are in all probability pretty securely laid, if fortune or great success he is likely ever to attain. There is a business rule of thumb to the effect that a man who has not begun to accumulate money by his fortieth birthday will never be rich. No doubt as applied to the average man there is much truth in this off-hand maxim; and what applies to pecuniary accumulation applies with about equal force to success in general,—the one being, indeed, for the average man, the tangible test of the other.

But all this, it must be observed, is very far from suggesting that the man who has passed the threshold of old age cannot be expected to perform any further useful work;—though this interpretation has been put upon it by some rash critics. It requires only the briefest turning of the pages of a biographical dictionary to dispel any such illusion as that. It is one thing to say that the man who has not begun to show promise of success by middle life will probably never attain the heights; it is quite another to say that achievement must have reached its maximum at that period. To assert the latter, would be to fly in the face of the most patent and familiar life-histories. If most men have laid the foundations of their life-edifice at forty, few indeed have completed the superstructure.

But even as regards the beginnings, there are notable exceptions; and sweeping generalisations, based on observation of the average man, are sure to run amuck of that rule-breaker, the exceptional man. Whoever cares to compile a list of notable achievements accomplished by men past middle age, will find himself confronted not only with a formidable list of workers who have added to their fame or fortune in later years, but also with a not inconsiderable list of men who entered new fields after middle life, and attained great distinction in these new fields.

Julius Cæsar, for example, second to none among military conquerors, had no military reputation till he was past forty. Oliver Cromwell was an untried tyro in military art when he entered the field against his king at forty-three. Blake, who by common consent must be remembered as one of the greatest of admirals, was past fifty before he first set foot on a war ship. Grant, who won what Mommsen described as "the greatest conflict and most glorious victory in all history," was following with small success the business of a tanner at thirty-five,—though of course it must be recalled that he had earlier had a military education. Von Moltke, planner and executor of the most brilliant and cataclysmic campaigns of modern times, would have passed away unknown to fame had he died at seventy; he first found his opportunity in those "doubtful years" beyond three score and ten.

In all these cases, it will be observed, it was the presentation of new opportunities, due to external conditions, that gave rise to the new lines of action that led the actors on to successful achievement. To a certain extent the same thing is true of Columbus, who made his memorable voyage at fifty-six, and of Magellan, who traversed the strait that bears his name, on that first daring voyage of circumnavigation, at fifty. Columbus would have started much earlier could he have found the means, and Magellan would not have started at all but for the new impulse to exploration that the discovery of the New World had developed. But examples are not lacking of men whose new line of activity, entered on after middle life, depended entirely on their own volition.

Thus John Milton, private secretary to Oliver Cromwell and political polemist, decided at forty-seven to write an epic poem; and ten years later produced "Paradise Lost." Richardson, one of the fathers of the English novel, first turned his attention to fiction-writing after he was fifty. Scott turned rather late in life from poetry to prose, and made himself instant master in the new field. Adam Smith, professor of Moral Philosophy, resigned his university chair and turned his attention to economic questions, and, after ten years of study, produced, at fifty-three, under title of *The Wealth of Nations*, the work that founded the modern science of Political Economy. The economic system which Smith's work supplemented and perfected had its chief exposition in the *Tableau économique* which François Quesnay, the French professor of surgery and personal physician to Louis XV., published at the age of sixty-two, and to the same author's *La physiocratie, ou constitution naturelle du gouvernement le plus avantageux aux peuples*, which appeared nine years later. Similarly J. J. Rousseau's *Contrat social*, "the bible of modern democracy," was a work of mature manhood, appearing when its author was in his fiftieth year.

Faraday was past middle life before he turned his attention to electricity, yet his experiments in this field laid the foundation of the modern science of electrodynamics. S. F. B. Morse, the artist, was thirty-six before he first became interested in electricity. He was forty-one before he conceived the practicability of the electrical telegraph, and past fifty before he demonstrated the validity of his idea. James Watt also was past fifty before he demonstrated the commercial value of his improved steam engine. Fulton was past forty before his first steam boat crept along the Hudson, and Stephenson was almost fifty when the "Rocket" made him famous; but both these inventors had virtually perfected their mechanisms at earlier periods. None the less would they have failed of final success had their perseverance and enthusiasm flagged. Similar perseverance enabled Harvey at fifty to demonstrate the circulation of the blood, and Jenner at forty-seven to show the preventive power of vaccination over small-pox.

These illustrations from practical fields may be readily paralleled from the records of theoretical workers. Thus all of Aristotle's works that have come down to us were composed after he was fifty. Copernicus finished his revolutionary work on the solar system at fifty-seven. Bacon published the *Novum Organum* at fifty-nine, earning thereby the title of the "Father of Inductive Philosophy." Isaac Newton was forty-five when he completed the *Principia*, the work which made his contemporaries question whether he were a mere mortal. Kant was fifty-six when he published the first edition of the *Critique of Pure Reason*, and sixty-two when he sent forth the modified edition to the further bewilderment of legions of disciples and critics. Lavoisier was forty-six when he revolutionized the terminology of chemistry, thereby laying the foundations of the modern science of that name. Dalton was forty-one when his atomic theory gave a new insight into the nature of matter. Darwin was almost fifty when his *Origin of Species* appeared, to change the entire aspect of nineteenth-century thought.

Such illustrations seem to give ample proof that the fifth and sixth decades may find men still in their full flight of productive activity. Nor need we pause even here. Many a worker has been able to defy the onslaughts of time still more effectively. Each of the three great tragedians of Greece, Æschylus, Sophocles, and Euripides, continued to write with undiminished vigor and effectiveness till past threescore and ten; and Sophocles produced the "Œdipus Colonus," which ranks among his greatest works, when he was more than eighty. Socrates seems to have been taken off in his mental prime, though he also had compassed his threescore and ten years. Plato continued to teach in his famous Academy till his death at eighty and the comprehensive "Republic," the "Timaeus," and the unfinished "Critias," are believed to have been composed in his latest years. Herodotus was probably hard upon sixty when he completed his history. Thucydides, dying at seventy-five, left the history of the Peloponnesian Wars unfinished. Tacitus, the greatest of Roman historians, was yet another classical writer who made the world debtor to his seventh decade.

But it is not the classical world alone that can show its lists of active septuagenarians. The most recent generations can hold their own, in this regard, with the great days of the past. Goethe, greatest master of the Germanic tongue, finished "Faust," his master work, on the eve of his eighty-third birthday. Alexander von Humboldt wrote *Cosmos*, the crowning literary product of his active life, during his last seventeen years, completing it in his ninety-third year. As it is a work summarizing the universal knowledge acquired in a life-time of study, the time of its composition was most happily chosen; though the uncertainty of that eighth decade—not to mention the ninth—makes the experiment a doubtful example to attempt to follow.

Other tireless workers whose prolonged activities have too recently terminated to have been forgotten by any reader of these pages are Gladstone, Bismarck, Von Moltke, Tennyson, Herbert Spencer, and Theodore Mommsen.

Not to multiply examples, it must be clear that a man is not necessarily a fossil in mind because he has reached the stage of life when his bones begin to show an increased deposit of earthy matter. Gray hair is not of necessity associated with mental waning.

These examples, then, virtually supply the answer to the query with which we started. It seems sufficiently demonstrated that there is nothing inherent in the nature of the human organism that forbids one to begin a new work or to push on with an old one because one's life has compassed more than half its normal limit. Surely your life is not of necessity a failure because you have not begun to achieve success at forty,—provided always that you have certain exceptional qualities of persistency and courage; and the proof of that must be found in the deed.

If until now you have sought after false ideals, striven in the wrong direction, and you now have opportunity to start out aright, you should now be able to profit by your mistakes. Experience should have taught you something,—if it be only what to avoid. Equipped with maturer judgment, you should work to better advantage than your younger rivals. Your effort should bring you more directly to its goal. You should accomplish more in a given time than you could have done at twenty.

Your chiefest danger, however, is that you have allowed your ideas to become fixed, inflexible; and that you have lost enthusiasm. In that case, you will find yourself at a disadvantage, and you cannot hope to compete with the workers of the younger generation. Should you lose that philosopher's stone called Interest, you will soon find yourself revolving in a narrow circle, learning nothing new, forgetting rather than acquiring. In that event you will soon be outstripped in the race. But if, on the other hand, you do make progress, the amount of that progress—granted reasonable natural abilities—will depend in no small measure upon the extent to which you keep young in interest and imagination; receptive, energetic,—in a word, fresh-viewed or open-minded.

To maintain such freshness, then, is obviously one of the most desirable ends of self-culture. He who achieves that end will solve in a measure for himself the old problem of the searchers after the Elixir of Life. The Spring of Eternal Youth, which Ponce de Leon failed to find in his long journeyings, you will have found in your own home, wherever that may chance to be,—or, to be accurate, the fountains of prolonged, if not of eternal, youthfulness.

But how may this alchemistic miracle be accomplished? Of a truth, not without heroic effort. Ceaselessly you must guard that citadel of mind, your body, against the encroachment of vicious habits of sensual indulgence;—against overeating, which clogs the systems with useless adipose; against the drugs that, in excess at any rate, promote the destruction of useful tissues. Ceaselessly you must strive by active exercise to keep your muscles resilient, responsive, that your circulation may be free and active, and your mind proportionately eager for action, instead of sluggish and inert. Ceaselessly you must challenge the mind itself, give it new tasks, demand that it maintain an interest in the new thoughts of each successive day and week and year; that it establish new habits, adapt itself to new conditions.

Seneca suggests—following Pythagoras—that at the close of each day one should review the deeds of the day, in order to gain new wisdom for the deeds of the morrow. Similarly, for the present purpose, you might wisely challenge your thoughts of the day, to inquire what you know to-night that you did not know this morning. Extending the process, you might well sum up at each week's end the new facts or new points of view that the experiences of the week have brought you. And at such recurring anniversaries as the New Year, your birthday, your wedding-day, and the like, you will surely not act wisely if you do not indulge in reminiscences to the extent of challenging from this point of view the developments of the year gone by.

Fear not, after each such analysis, to hold fast to the old truth that still seems good; but take yourself to task if no new truth has made itself manifest to you in the newest cycle;—for of a certainty the world has not stood still.

As a tangible aid, in this process of perpetual self-rejuvenation, it is well to keep your mind burnished by giving it very definite tasks involving the necessity of new effort. Take up, for example, the acquisition of a new language from time to time, with its novel grammatical forms, its unfamiliar vocabularies. Giuseppe Mezzofanti, the celebrated librarian of Bologna University and of the Vatican, is said to have known eighteen languages when he was thirty-six, and fifty-eight at the time of his death,—speaking and writing them all with great facility. As he lived to be seventy-three, he must have averaged a little better than one language a year for each of the last forty years of his life.

I do not mean to imply that the man of average linguistic talent can duplicate such a record as that. To accomplish such feats, qualities of brain and ear are required which must be inherent, like any other kind of sheer genius, and which remove their possessor from the field of competition. But the example is stimulative none the less. If Mezzofanti could acquire forty languages after mid-age, you surely can learn at least to read five or six, be your talent ever so meagre. And if you cannot master each successive one a little more readily than the last (other things being equal), you must feel that you are permitting your mind to deteriorate; you are losing your grip on the secret of eternal youth.

If perchance the study of languages does not attract you, take up some other line of mental action that will offer similar stimulus,—some new line of scientific thought or experiment, some fresh field of literary or philosophical investigation. Make sure that it is something that involves real freshness of effort, not merely the revamping of your old ideas. The less zeal you have for such new investigation, the more you need to undertake it. Spur your mind onward, then, till it develops eagerness for new effort. Shake off your lassitude; rouse from your slumber. Cry, Forward!

If so you will strive, with ever fresh resolve, there will be for you, during the period of your reasonable working days, no such problem—granted average immunity from disease—as that of Youth versus Age. Like those other exceptional and favored ones, you may come in due course to be fifty, sixty, seventy years young; always progressing, always striving, ever tasting the joys of accomplishment. Die you must some day, as all the other searchers after the Philosopher's Stone have died in their turn. Grow decrepit you must, in the normal course of events; but your efforts may in effect prolong your life, by warding off the evils of a premature senility. Old, in the opprobrious sense of the word, you need never be.

"The measure of a man's life is the well spending of it, and not the length." —*Plutarch.*

"The good man prolongs his life; to be able to enjoy one's past is to live twice." —*Martial.*

Chapter XI

GOLD VERSUS IDEALS

"You cannot properly call a man happy because he possesses much. He more justly claims the title of happy who knows how to make a wise use of the gifts of the gods, and how to endure the privations of poverty." —*Horace.*

"To be rich is to have a ticket of admission to the master works and chief men of every nation." —*Emerson.*

"Every man is a consumer and ought to be a producer. He fails to make good his place in the world unless he not only pays his debt, but adds something to the common wealth."
—*Emerson.*

"In this case also the war is against two enemies—wealth and poverty; one of whom corrupts the soul of man with luxury, while the other drives him by pain into utter shamelessness." —*Plato.*

XI

GOLD VERSUS IDEALS

THERE is a certain momentous question that presents itself to nearly every ambitious youth early in his career, and upon the answer to which practically all his future may depend. The question is this: Shall the life ideal ignore as far as may be the acquisition of money; or must we reckon gold among the necessaries even of the intellectual life?

Few questions give more open field for the maundering of platitudes or the presentation of illustrative quotations than this. It were easy to discourse at almost any length on the false allurements of wealth. But I shall instead content myself with two quotations, which present this side of the case in essentially the same light; one of them terse as becomes its Greek origin, the other more detailed, yet in effect an amplification of the same text. I present these excerpts the more willingly because one was written more than two thousand years ago, the other about a century and a half ago; hence they have the added value of teaching that the worship of Mammon is by no means peculiar to our own age or generation, as is sometimes foolishly assumed. In point of fact, we should find the same spirit rampant throughout the range of history, did we choose to make the most casual search for it.

Our Greek quotation is to be found in the Greek Anthology, where it is ascribed, somewhat doubtfully to Theognis. It is this succinct but highly suggestive utterance:

"Money to mortals becomes a madness."

Our other quotation is from the "Adversaria" of John Jortin, an English church historian and critic, who was born in 1698 and died in 1770. Though rather long, the excerpt has peculiar pertinence to the present inquiry, since happiness is its direct theme; and the case it presents is so usual a one that we may well give it precedence to the opportunity for moralising.

"Where," says Jortin, "where is happiness to be found? Where is her dwelling-place?

"Not, where we seek her, and where we expect to find her. Happiness is a modest recluse, who seldom shows her lovely face in the polite or in the busy world. . . . Among the vanities and the evils, which Solomon beheld under the sun, one is, an access of temporal fortunes to the detriment of the possessor; whence it appears, that prosperity is a dangerous thing, and that few persons have a head strong enough, or a heart good enough to bear it. A sudden rise from a low station, as it sometimes shows to advantage the virtuous and amiable qualities, which could not assert themself before, so it more frequently calls forth and exposes to view those spots of the soul, which lay lurking in secret, cramped by penury, and veiled with dissimulation.

"An honest and sensible man is placed in a middle station, in circumstances rather scanty than abounding. He hath all the necessaries but none of the superfluities of life; and these necessaries he acquires by his prudence, his studies, and his industry. If he seeks to better his income it is by such methods as hurt neither his conscience nor his constitution. He hath friends and acquaintances of his own rank; he receives good offers from them and he returns the same. As he hath his occupations, he hath his diversions also; and partakes of the simple, frugal, obvious, innocent, and cheerful amusements of life. By a sudden turn of things he grows great, in the church or in the state. Now his fortune is made, and he says to himself, 'The days of scarcity are past, the days of plenty are come, and happiness is come along with them.' Mistaken man! It is no such thing. He nevermore enjoys one happy day compared with those which once shone upon him. He discards his old companions, or treats them with proud, distant, or cold civility. Friendship, free and open conversation, rational enquiry, sincerity, contentment, and the plain and unadulterated pleasures of life are no more; they departed from him along with his poverty. New connections, desires, new cares, take place, and engross so much of his time and of his thoughts, that he neither improves his heart nor his understanding. He lives ambitious and restless and dies RICH."

That the case thus detailed by Jortin is drawn from life, no one will question. Most of us could point similar illustrations from our experience of this later generation. The moral of such a life points itself, and the contemplation of such a denouement might well serve as a warning. But before we are led to consider its lesson as altogether definitive, let us pause long enough to reflect that the subject has another aspect. As suggesting this let me introduce yet another quotation; this one, like our first, from the wisdom of the Greek Anthology.

The author this time is Palladas. He apostrophises the symbol of wealth in this fashion:

"O gold, the father of flatterers, the son of pain and care: to have thee is a fear; not to have thee, a sorrow."

It is this last clause that demands our attention: "Not to have thee is a sorrow"—"If an evil, thou art a necessary evil; your ideal is false, yet it will not be altogether gainsaid in this practical world."

And here again the universal experience of mankind gives assent. The words and the thought are a paradox; but the paradox is none the less a truth. Our Crœsus as presented by Jortin, is an unhandsome figure; but could we not easily enough match him from the ranks of abject poverty? Much money to mortals may of a truth become a madness; but does sanity come as the handmaid of Want? And at the very worst is our ambitious and restless plutocrat less happy than the aspirant after higher ideals who knows not where to find a crust for his dear ones? Sane judgment dare not affirm it.

We are forced, then, to reckon with this "father of flatterers, son of pain and care," affect to despise him how we may. And however lightly we may thrust aside his allurements in the time of our idol-forming youth, we shall probably find that they will make themselves felt at some later period of our life-journey.

I recall very clearly the impression made upon me in early manhood by the cynical words of a successful business man, whose pursuit of money had not altogether warped his mind away from other interests, and whose keenness of insight and sanity of judgment gave weight to his utterances. "My lad," said he, "be advised by one who knows the world. Rest assured there is no man who does not sooner or later come to see the day when he appreciates the value of money. No man is all his life a scoffer before the shrine of Mammon."

I chose not to believe that cynic then. I do not like to admit to myself that I quite believe him now. Yet I fear that the wider one's outlook on history, the fuller one's knowledge of mankind, the nearer must one come to conceding the general truth of that unwelcome estimate.

At the very worst, however, perhaps the estimate is susceptible of a less unwholesome interpretation than the cynical phrase-maker himself would have put upon it. After all, gold is only a symbol. A mountain of it, on an uninhabited island, would be worthless to a Crusoe whom fate stranded there. But in our civilization it may be the symbol of ideal things no less than of sordid gratifications of the sense. It may be essential to the securing of mental and spiritual no less than of material food. It not only *may* be; it *must* be essential, since it is symbolic of all things that sane mortals desire.

And that is why even the most idealistic dreamer may not always scoff before the shrine of Mammon.

That is why the aspiring youth has not made a choice as he thinks, but has only expressed a paradox, when he says exultingly: "I choose Ideals rather than Gold." Everybody chooses Ideals; it is only that the ideals of one are associated with things more obviously and directly purchaseable with gold; those of another with things less directly and obviously purchaseable.

Let us then frankly recognise and as frankly admit that in this practical world a certain amount of practical success is essential to happiness. The man who nurses an ideal in poverty will not, as a rule, be able to pursue that ideal so far as would be possible were he surrounded by material comforts. Hunger may sometimes have inspired the visions of a fanatic; but the saner creations of genius are conceived without the stimulus of an empty stomach. Indeed, it is scarcely too much to say, with the old Greek Dion Halicarnassus: "No generous thoughts can suggest themselves to a man in want of the necessaries of life."

Certain it is, on the other hand, that no inconsiderable part of the world's creative intellectual work has been performed by men who could scarcely have worked so well —if indeed they could have done their work at all—had not fortune favored them, in the ordinary materialistic sense of the words.

We are on the whole much too prone to think of genius as starving in a garret. In reality, the highest genius is usually associated with—perhaps is never dissevered from— the capacity for practical achievement. Shakespeare made a fortune with his pen, in an age when literature did not usually bring large emoluments. Milton was the efficient secretary and practical apologist of the most practical of conquerors and rulers. Dante took an eager interest in the political conflicts of his time, as the most casual reading of the *Divine Comedy* will reveal. Machiavelli and Bacon, Leonardo and Newton were the counselors of princes; as, in the remoter age, were Aristotle and the two Plinys, and as, in our own day, were Gladstone and Bismarck. Voltaire turned aside from literature for a short time to make a fortune, in order to prove, as he characteristically said, how easily the thing might be done. Grote and Schliemann began their historical labors after they had gained financial independence in business pursuits; and the sweetest singer of the Victorian age was noted for the thrift with which he disposed of his inspired wares.

A popular form of cant would make it a misfortune to inherit wealth. Doubtless sometimes it is so, to youth of defective stamina; but consider how often, on the other hand, inherited competency has proved itself no hindrance to genius. The list is a long one—from Plato in antiquity to Gibbon, Byron, Darwin, Browning, Ruskin, Tennyson in modern times—of men of genius who were nurtured in luxury, and who never had to consider the question of material ways and means. Who dare affirm that for these men, and a host of their fellows, the possession of gold was not a means to the attainment of the highest ideals?

Affect not, then, my eager aspirant, that fine scorn of the fleshpots. Render unto the power of gold the tribute that is its due; only adhere to that other principle which demands that money shall be your servant, not your master. Therein lies the key to the entire situation: from first to last you must remember that gold is a means to an end, and not itself the end. Cling to your visionary ideals, even while pursuing the sordid paths of the practical business life. If your desire be great enough, you will find a way in time to gratify it. The very fact that you are yearning to get out of the toils of present labor, will teach you diligence and prudence, and keep you from the dangers of unqualified Mammon-worship. If your ideal beckon with constancy, you will find time in hours of relaxation to recognize its claims. And in so doing you will be developing that other side of your nature in a way to give you freedom from the tyranny of gold. You will prevent, or help to prevent, the lust of material gain from assuming the force of an imperative fixed idea. And thus when you finally have a reasonable competency you may be able to turn aside from business and enjoy a life of freedom.

Chapter XII

VOCATION VERSUS AVOCATION

"Human happiness . . . seems to consist of three ingredients,—action, pleasure, and indolence. And though these ingredients ought to be mixed in different proportions according to the different dispositions of the persons, yet no one ingredient can be entirely wanting without destroying in some measure the relish of the whole composition."

—*David Hume.*

"I am rather disposed to say all things are good in as far as they are pleasant, if they have no consequences of another sort, and in as far as they are painful they are bad."

—*Plato.*

XII

VOCATION VERSUS AVOCATION

WE have just contemplated optimistically a play-time that is to come after your business activity has put you into possession of a competent fortune. But we must not slur the fact that this ideal of financial independence may never be attained. Strive as you will, under existing economic conditions, you may never acquire a competency that will enable you to retire from business. Most men never do—more's the pity. You will do well, then, to make sure of the benefits of relaxation by seizing them as you go along. All work and no play makes a dull boy and a tiresome man. Your brain, like any other machine, needs a rest from the grinding cares of the day. A change of activity—a diverting line of thought or a game of chance or skill—has marvellous recuperative value, even aside from its directly pleasurable effects. It is medicine to a brain distraught with business worriments.

And if such a line of action may be curative of ills that already exist, it may be no less preventive of future evils. If it puts your feet on firm ground to-day, it may also prevent you from crossing to-morrow's bridge before you come to it. You will do well, then, on many accounts, to cultivate habits of pleasurable activity as a part of your every-day routine. Give yourself the freedom of occasional hours of mental diversion from week to week and from year to year. You will gain time by it in the end. You will come nearer to living your life fully—which is another way of saying happily. The man that has no interests outside the one line of his business or profession develops at best a pitifully one-sided and incomplete personality. Even though he attain great success, we may question whether his aggregate of pleasure has been as large as it might have been had he widened his horizons. He has lacked the all important spice of variety. He has sat at a banquet of a single course.

You may well hesitate to imitate him in this regard, even for the prize of like success. Rather take warning from his warped personality. If you yourself have no innate interest or ideal that beckons you aside for hours of relaxation, you should create one. In other words, you should choose a hobby if a hobby has not already chosen you. If you have learned the art of working, you should study only less ardently the art of playing. As a factor in your happiness, the choice of an avocation is scarcely less important than the choice of a vocation.

As to the exact character of this avocation, your individual tastes, opportunities, and needs must decide. If you have a strong innate leaning toward some special line of investigation, that of course will aid you in the selection. Otherwise, if you are an average man, it perhaps will not greatly matter which one of many lines you pursue, provided it be one in which you can develop a real and abiding interest, and that it be not too similar to the work of your business life.

The thought naturally suggests itself, that, if your business is one that induces sedentary habits, your hobby should take you into the open and give you physical exercise. Hunting, fishing, riding, yachting, automobiling at once come to mind; and such games as tennis, and in particular golf. All these have their utility as purveyors to health of mind and body. But it is only for the least intellectual minds that these pursuits, severally or jointly, could quite fill the needs of our present purpose. As ideals for the leisure of later years; as boon companions of the spirit in all weathers and in all seasons, these scarcely serve, whatever the measure of enthusiasm with which they may be followed in youth or in middle life.

Moreover, there are many men who have a positive distaste for physical exercise, and who take little or no interest in games or competitions of any sort. Many men of the greatest mental activity are physically lazy, even though possessed of fine physique and great physical strength. Such a man, for example, was Abraham Lincoln, who used to pronounce himself the laziest of men. In such a case, a physiological explanation is perhaps to be found in an inherent tendency of the brain centres that have to do with higher mental efforts to operate at the expense of the so-called motor centres.

But whatever the explanation, the fact holds, and must be reckoned with in determining the choice of an avocation. For such a person, no mere physical diversion could fully serve the varied and comprehensive purposes of a hobby.

But fortunately there is no dearth of less strenuous pursuits from which to choose. The field of mechanics, for example, offers almost boundless opportunities for investigation in lines that lead on and on to realms of unending interest. Whoever will fit himself up a little physical laboratory, with the smallest equipment of apparatus in the line of, let us say, electricity, will find that he has provided a play-house that has infinite possibilities. A chemical laboratory has equal possibilities, and may be inaugurated with the most meagre equipment. Dr. Priestley, the discoverer of oxygen, made most of his experiments with an old gun-barrel. He was a preacher by profession, and only an amateur in science; yet he will always be remembered as one of the most important figures in the history of scientific discovery. To be sure, the equipment of his eighteenth-century laboratory would not satisfy the investigator of to-day; yet even now a start may be made with a small and inexpensive supply of implements.

Or, again, the field of optics, in some of its departments, is full of allurements. I know a man, a printer by profession, who devotes all his spare time to the investigation of gases and other substances with the aid of a spectroscope, and who finds new zest in life with each succeeding experiment. Others find a microscope, with its revelations of the mysteries of the unseen world, a source of abiding and ever-growing interest. Or, if you prefer, a small telescope will introduce you to a new universe of constellations, whose mysteries enthrall the mind more and more completely as they are farther and farther investigated.

And in any one of these fields you might become a discoverer of new facts—a veritable explorer of the unknown—while yet you worked only as an amateur. Herschel electrified the world with the discovery of the planet Uranus while he was still a musician by profession. Olbers, another great figure in the history of astronomy, remained an amateur all his life. He was a physician by profession, like so many other path-makers in the field of science,—witness, for example, Black, the chemist, Hutton, the geologist, the marvellous Thomas Young; Erasmus Darwin, who preceded his grandson as an evolutionist; Mayer, the discoverer of the law of the conservation of energy; Leidy, the American palæontologist; and Huxley, the great protagonist of evolution. All of these—and the list might be indefinitely lengthened—were men who at least began their career of discovery while practising medicine as a means of livelihood.

Nor need we confine such a list to the record of achievements in scientific lines. Oliver Goldsmith, Thomas Smollett, and Frederick Schiller were all trained to the medical profession; and Jean Astruc was court physician to Louis XIV at the time when he published the work that laid the foundation of the modern methods of so-called Higher Criticism of the Bible.

Such cases show that the avocation may lie far afield from the line of every-day practical activity. Part of them suggest also that the avocation may presently supersede the vocation; but there can be no possible objection to that, in case the apostate has demonstrated his capacity for the new calling. Indeed, I am all along urging that the avocation chosen should be one which will supply opportunity for permanent occupancy and ever-growing interest in the event of your being some day able to give it your exclusive attention. That is another reason why the games and recreations mentioned a few paragraphs back are not in themselves adequate to take position as desirable avocations.

It should not be overlooked, however, that the adoption of an out-door recreation such as walking, riding, automobiling, or golfing,—and in even greater measure the sport of the hunter or fisher,—may be advantageously combined with some Nature-study, such as botany, zoology, ornithology, or geology, that will round it out to full proportions. But in such a case the original sport will presently come to take an altogether subordinate place in your interests, as your enthusiasm for the investigation of a new bird-note or an unknown blossom or a mysterious ledge of rocks becomes more and more ardent. And these Nature-studies, I may add, have this further advantage, that they furnish the best possible introduction to the study of Nature's highest product, man himself. Zoology may prove the highway to anthropology and sociology; and no fields are more open than these to the investigations of earnest and logical students; none stand more in need of workers who have had such biological training as Nature-studies would give you.

It may be, however, that your inherent tastes are such that no line of scientific investigation at all appeals to you. In that case, the wide field of the arts will surely furnish an attraction. Perhaps you care for pictures? Then by all means study drawing, and learn to make pictures; for there are few more perennial pleasures than that which comes from seeing new forms body forth on the hitherto blank paper or canvas. Nowhere else does the sense of creating, with all its joys, come more vividly than in the production of a new entity so tangible, so unique, as a picture,—provided, of course the picture is a fairly artistic one.

But what if you lack the inherent capacity of eye and hand to take on the training essential to the mere technique of the artist? As to that, you need not have much fear, if you have any taste for the subject at all. It is often said that anyone who can learn to write can learn to draw. I have had occasion to point out that the history of the art of writing shows that this assertion expresses something less than the truth. There were many generations of people who could draw before ever there was one that had even the conception of writing. And when the idea of writing did make itself tangible, the feat was accomplished merely by putting together a series of pictures to express a sequence of ideas. The picture-writing of the Mayas of Yucatan and the hieroglyphics of the ancient Egyptians show that among these peoples the scribe had need to be a draughtsman of no mean skill. And the feat of the modern penman seems less difficult only because writing is so universal an accomplishment. In point of fact, every child learns to draw the characters before he can properly be said to write them; and if he learns to draw these characters, there is no reason why, with proper effort, he should not learn to draw others in endless variety.

Of course it does not follow that everyone could learn to draw really well. But, on the other hand, it is surprising to observe, in any drawing class, how many pupils attain to practically the same stage of efficiency. In the art schools everyone becomes a fairly good technician. Not all reach the goal with the same ease, of course; but all do attain a fair measure of technical skill if they persevere. It is amazing to contemplate the acres of canvas, every square foot showing high technical efficiency, that are exposed each spring in such exhibitions as that of the Paris Salon. Not one in ten of the artists that exhibit here has any profound artistic inspiration; not one in ten has any message to give the world, or will ever paint a memorable picture. Nine in ten of them have all their art in their fingers and none in their brains; but their mastery of the mere grammar of the craft is all the more startling for that, and the more inspiriting to the man who, possessing soul-pictures, needs but the training of the hand to be able to make them tangible.

If, then, you feel that it would give you pleasure to paint, do not be debarred from making the effort for fear that you will not attain full mastery. Your effort, if intelligently directed, and faithfully pursued, may lead to far better results than you would dare predict; and if, on the other hand, your output should in the end prove but mediocre, it will be no crime to have added one more to the large company of artisan-artists. If you have gained pleasure from the effort in the mean time, your main purpose will have been achieved. For, be it understood, in all this I am speaking of art as an avocation, not as a profession. I would advise no one to enter the crowded ranks of professional art, who had not both the keenest predilection for the calling, and the most demonstrable native talent.

It is unnecessary to speak here in detail of such companion arts as sculpture and music. *Mutatis mutandis*, what has been said of painting applies equally to them. Either can offer to its votaries an ever-widening circle of interests, and a full quota of hours of unalloyed happiness. But here also, it must be understood, earnest effort and long practice may be required to master such details of mere technique as lie at the foundation of true proficiency.

For him who has not the time, the energy, or the inclination to assail these difficulties of technique, there remains the refuge of photography,—half an art, half a mechanical science, but a wholly alluring craft to almost anyone who will take it in hand with the intent to master all its possibilities. It is a craft, too, that, aside from its intrinsic merits, has great utility as an adjunct to various other lines of study. The spectroscopist, the astronomer, and the microscopist find it invaluable in recording the revelations of their instruments. The artist finds it of use in lieu of sketch book to record fleeting impressions; and for the student of Nature the camera has come to be an inseparable companion. Many a quondam sportsman now hunts with camera instead of gun, and finds his skill taxed to the utmost in bringing game within the desired range of the new weapon, while the result of his prowess is to leave bird and beast uninjured, yet to give him trophies that are far more satisfactory than any number of carcasses of slaughtered victims.

This reference to the varied uses of photography suggests—what, indeed, goes without saying—that you need not confine your diversional interests to a single line. As a sheer means of gaining pleasure, it is often better that you should not do so. Of course your efforts remain superficial and lack mastership somewhat in proportion as they are diversified; but, on the other hand, it often happens that one craft helps another, and, failing of that, a diversity of avocations implies a wider range, if not a profounder depth, of pleasures. Few persons of varied interests regret their versatility, I opine, even though they may feel that greater concentration would have carried them farther in a single line.

But whether your hobbies be single or diversified, and whether they follow any of the lines just suggested or range into other fields that we need not enter here, there is one incidental opportunity they are sure to open to you that is perhaps even more important than their direct influence as pleasure-bearers; the opportunity, namely, to secure acquaintance with sympathetic minds interested in the same pursuit. Every craft has its bulletins and journals to supply indirect communication between its votaries; and its clubs, associations, and assemblies of one sort or another to facilitate personal intercourse.

This means that life-long friendships may be formed between persons of kindred tastes, through the interposition of the hobby. And after all, there is no one other source of happiness that is so certain and so lasting as communion with friends. "The best of life is conversation," says Emerson; and conversation implies mutual interests and common knowledge. It is useless, for example, to talk of your hobby to some one who does not even understand its terminology.

The friendships thus formed differ, too, from those formed in business circles, in that they are likely to be more unselfish and hence more sincere. Business competition brings out the sordid side of a man's character; and your pure man of affairs is likely to take a pessimistic view of human nature. He doubts even the common honesty of his fellows, and contends that "every man has his price." Hard knocks in business have made him suspicious of his competitors. He knows that the business maxim of at least a large proportion of them is: "Get money; get it honestly if you can—but get it!" He is the rare exception if he has not been more than tempted to do as he sees the others doing; and at the very best he tends to grow selfish and unsympathetic and cynical. He must ever challenge the sincerity of the friendship that presently in the course of business events, may have to be weighed against a monetary consideration.

But the friendships that have their origin in the mutual interests of the avocation are put to no such test. Here there is no question of rivalry or competition in the proper sense of the words, but only of friendly emulation. The proficiency of our friends, however great, will take no money from our pocket; will in nowise influence the character of our own work, except as it stimulates us to more zealous effort.

Then, just as the stern pursuit of money tends to bring out the worse side of a man's nature, so the pursuit of a pleasant ideal tends to bring out the better side. The sordid maxim, "every man has his price," whatever its force in the business world, has no application here, for all the premiums are, beyond question, awarded to honest effort.

We may indeed believe—as unquestionably a large number of men of affairs do believe—that honesty is the best policy, even as a pure business investment; but we cannot be blind to the fact that dishonest business methods do sometimes lead to fortunes. Moreover, honesty is a word susceptible of some flexibility of interpretation, as applied to practical affairs; and it sometimes happens that methods of business come to be pretty generally accepted as legitimate which will not stand too close scrutiny from the standpoint of abstract morality. There are those critics who would contend that nearly all the great fortunes of to-day have been accumulated through the practise of methods open to such adverse judgment. Not infrequently you may see the knowing ones shrug their shoulders, and hear them remark cynically that "nothing succeeds like success," when one of these fortunes is in question.

But there can be no such imputation against the methods by which you may arrive at any successful issue of your avocational labors. Here the new fact you discover must be susceptible of verification by other observers before it can bring you credit; the new method of investigation must be one that others can also follow; the new interpretation must be one that appeals to other connoisseurs by its logicality and validity; and—supposing your line to be an artistic one—your picture or sculpture or what not must bear in its every line the proof of earnest effort and honest method. Here, too, nothing succeeds like success, but there are no shady bypaths that can by any possibility lead to the heights.

Note yet another contrast. Business competition, however honestly pursued, is a strife—a veritable battle; your success, however legitimate, is attained at the expense of some less skilful or less fortunate rival; and your fortune, unless you use it wisely, may be a positive injury to mankind,—a detractor from the sum of human happiness. But your scientific investigation will rarely militate against the interests of any rival; will do no injury to any competitor, there usually being none. Your success will be something over which all men may rejoice; and in proportion as your discovery has importance, it will serve to aid others to the completion of their own investigations, or will add directly to the welfare of humanity at large. Similarly, but even more obviously, your work of art, in proportion as it is a success, will add directly to the sum of human pleasure—injuring no one. Your pursuit of an avocation has, then, this further merit, that, though you may undertake it solely for your own divertisement and pleasure, yet its results, so far as they have any importance at all, are essentially altruistic.

And this conclusion gives the crowning warrant to that gospel of relaxation which has been the central theme of the foregoing pages.

Part IV

MORAL ASPECTS OF THE PROBLEM OF HAPPINESS

"Pleasure is a good in itself." —*Plato.*

"Few are the good men and few the evil; the great majority are in the middle ground between good and evil."
—*Plato.*

"Aristotle was once asked how we ought to behave towards our friends; and the answer was, 'As we would wish our friends to behave towards us.'" —*Diogenes Laertius.*

Chapter XIII

LIFE COMPANIONSHIP

"Whenever we step out of domestic life in search of felicity, we come back again disappointed, tired, and chagrined. One day passed under our own roof, with our friends and our family, is worth a thousand in any other place. The noise and bustle, or, as they are foolishly called, the diversions of life, are despicable and tasteless when once we have experienced the real delights of a fireside."

—*John Boyle.*

"Happiness is not perfect till it is shared."
—*Jane Porter.*

XIII

LIFE COMPANIONSHIP

I TRUST it needs no argument to show that for the average normal person the decision to marry is a wise decision. The institution of marriage was the foundation rock of nascent civilization and has been the cornerstone of all higher social development. In individual cases the foundation crumbles, amidst the jeers of ever-present scoffers, but this tells only of human imperfectibility; it offers no argument against the institution itself. As well condemn life in houses because now and then a dwelling collapses to the destruction of its inhabitants.

But if marry we must and should, what, then, is the marriageable age? Is it on the whole desirable that the young man should marry at the very outset of his career and the maiden so soon as she is well out of school? Or should the selection of a life-companion be deferred until such time as a certain amount of experience of the world has matured the judgment of the choosers?

The great difficulty with our query is that early and fervid attachments are commonly thought of as savoring of the romantic or poetic, and as being therefore somewhat removed from the pale of sordid analysis. Yet in sober truth they should be dealt with in terms of natural history. It is as natural for adolescent youth of opposite sexes to attract each other as for birds to mate in the spring. And the youth might mate as freely as the birds do were it not for certain very imperative restrictions imposed by that new and in a sense unnatural state of things which we term civilization. The existence of these limitations, however, demands the exercise of something more than avian foresight and caution.

The development of the restrictions in question has its origin, in the last analysis, in a single all-important fact of the natural history of man; the fact, namely, that the human offspring requires about a score of years to attain the growth that will render it independent of parental care.

The importance of that salient fact in shaping the growth of civilization could by no possibility be overestimated. It is the primal fact among those natural endowments that have given permanency and stability to human society. It is perhaps foremost among the foundations of the kind of morality and virtue without which civilization could not have progressed to its present status.

Consider, for example, its influence on the question in hand. Our hypothetical birds, mating in the spring, soon have a nest of fledglings that will require their joint attention for five or six weeks at most; after which they may go their several ways. Under such circumstances it does not so very greatly matter whether the mates were well and wisely chosen; for half a dozen weeks do not make up a preponderant period of time even in the life of a bird. But our callow human youth, mating under stress of their primitive instinct, are pretty certain soon to have a fledgling or two in the nest, that will require their combined efforts for a score of years. Other fledglings will probably follow at intervals of two or three years, each one extending the period of parental responsibility by a like amount; and by the time the last fledgling is ready to leave the nest, the parents are no longer young, no longer middle-aged even;—their life-journey is far spent, their life-work near its completion.

Hence it is that human marriage is, under existing conditions, so fixed and permanent an institution. Hence it is that the average normal man and woman choose but once, while upon the wisdom of that choice will depend almost everything that makes for the happiness and usefulness of their own lives and the lives of their offspring. So long as marriage continues to bring, as an unavoidable sequel, the production of offspring, leaving the parents no option,—and such is the fact for the average man and woman to-day,—so long must the marriage state be regarded as normally a life companionship and a life-long mutual responsibility; nay, more, a responsibility that extends down the long line of unborn generations. Obviously then, no sane man or woman of normal endowment can wish to enter on the matrimonial state without full and earnest consideration, and the utilisation of the best selective judgment attainable.

But, on the other hand, we must not forget that it is possible to carry caution to a dangerous extreme. If there are many youths who tend to marry before they are really ready for so momentous a step, there are many others who tend to hold back from what they consider a dangerous experiment, and who drift finally into confirmed old-bachelorhood to the lasting dissipation of their best chances of happiness. And assuredly the case of these unfortunates must not be overlooked.

The youths, of both sexes, that come within the range of the present point of view, are chiefly those ambitious ones that make their way to the great cities, and undertake to carve out careers under the adverse conditions that prevail there. To be specific, the case I have in mind is that of the young men and women who, possessed of some measure of talent for a professional or an artistic career, are disposed to feel that marriage would be a hindrance. They are inclined therefore, to decide against matrimony, and—in the somewhat grandiloquent manner to which youth is prone—to elect a "Career" leading presumably to the heights of accomplishment and fame. The budding artist, the newspaper woman, the aspiring writer or musician are cases in point. They are wont to feel that "freedom" is necessary to them if they are to scale the heights. They must not be hampered by the cares and responsibilities of a family. Their mission is for something "higher."

To one who has passed the time of that fine young enthusiasm, there is always something delightful in the contemplation of the eager spirit of conquest which these adolescent aspirants manifest. Adolescence is the time for such day-dreams, and surely no sympathetic person would wish to rob the aspiring youth of one jot of his pleasure-giving ambition. Only too soon, in most cases, will he cast it aside, as he treads the rough path of experience. Nor, for that matter, would it be possible to dampen that ardor which owes its being to young blood pulsing strong in resilient arteries. At this stage of his career, the youth is for the most part beyond the pale of advice. He scorns the experience gained in an earlier generation. Old-fogy notions are not to check the promptings of his innate genius.

Moreover such youths often think themselves provided with all the comforts that matrimony could offer, without its attendant responsibilities and worriments. They regard the "love in a cottage" idea as obsolete; and as for "a loaf of bread, a glass of wine, and Thou" —why, they have the "Thou" on occasion, and are able to provide more sumptuous fare for mutual enjoyment than if the possession were permanent.

The attitude of mind here implied is one that has always found full development in the world's great cities, as an outgrowth of the ever-advancing standards of luxurious living. It reached a climax, for example, in imperial Rome when Augustus was led to put an official premium on matrimony, and to penalize celibacy. It seems a menace to the public weal, because its votaries—by hypothesis of a better class—fail to perpetuate their qualities; and it takes from the sum of individual happiness, since—as we have agreed to admit—the surest goal to this lies along the matrimonial way. It is a propensity that is the more deserving of attention because, with the enormous growth of city populations that characterises our age, it is becoming more and more a factor to be reckoned with.

What, then, shall we say to the young men and women who have reached years of discretion, yet are prone to accept the maxim of Leibnitz, that marriage is perhaps "a good thing, but one upon which the wise man should ponder all his life"?

A whimsical person might reply with fair enough show of reason that we may as well say nothing at all, since very few persons, young or old, marry merely because they are advised to do so, or for any reason except to please their individual tastes. He might point out further that the larger number of these very enthusiasts aforementioned, after fortifying themselves with seeming security in the pursuit of their career in single blessedness, find themselves, while still at a tender age, and quite unable to care for a family, married and settled down into conventional channels at the instance of some irresistible pair of eyes that their early enthusiasm had forgotten to reckon with. Nevertheless in view of the exceptional cases that do here and there carry out their early resolve, and as a solace to the vanquished pride of the great majority who are carried off their feet to the forgetting of their predeterminations, I venture to offer two reasons why the ambitious youth or maiden, of all others, should have a helpmate.

My first reason is this: That great art, in its very nature, is altruistic; therefore the would-be artist, in whatever line, should cultivate the altruistic spirit. He can never become too sympathetic with humanity, too fully appreciative of the points of view that lie beyond his early horizons. Grant that, and recall that a celibate life makes for selfishness, whereas matrimonial cares develop the altruistic spirit,—and the question as to whether the aspiring enthusiast should marry answers itself. In this view, it is self evident that his own spiritual and artistic growth demands the moulding influence that no one but a life-companion can give to best advantage.

But there is a no less urgent reason of a more personal character. It is found in the fact that the pleasure-seeker of to-day will not always retain his youth, nor his interest in the same pleasures. Sufficient unto its day are the pleasures of youth; but what of the morrow? What of those later years when you need disinterested friendship and sympathetic companionship?

The question answers itself; and if it did not, a goodly proportion of the seemingly confirmed celibates answer it in due course by finally deciding, perhaps in early middle-life, to join the ranks of Benedicts. They do well, for it is better to be wise late than never; yet it is hardly to be admitted that these late comers have now the same chance for happiness that they might have hoped for had they not thrown away the opportunities of the golden years.

To be sure they have now matured that judgment by which we have set such store; and they are perhaps less likely to be carried away by a transient passion,—albeit the familiar verdict "no fool like an old fool" must not be forgotten. But they have cultivated an egoistic view of life throughout those formative years;

day by day they have grown in selfishness, thinking first and foremost of their own individual needs and wishes; and these habits of self-interest, many of them incompatible with the happiness of their marriage partner, cannot readily be laid aside. Their time of plasticity, of receptivity, is past. They can no longer make little concessions as they might once have done, in the interests of harmony. Temperamental differences cannot now be harmonised as they might have been at an earlier age. There will not now be the opportunity for mutual sympathy through meeting difficulties shoulder to shoulder as there would have been in the early day of a career that has now reached secure business goals. And so matrimonial disaster may come, as the sequel to what might have been a happy union had it been consummated earlier in life.

All in all, then, it would appear that the very late marriage as little solves the problem as the very early one, and we are forced here once more to take refuge in that safe territory of the happy mean: which, being interpreted in set terms, perhaps implies that the securest age for marrying lies somewhere in the twenties,—after mind and body are approximately mature, but before they have begun to fossilize.

The old Greeks, who fixed the marriage age for men at twenty-five, were probably as near the mark as the nature of the case permits. But of course we must remember, in interpreting such a rule of thumb, that some men are more mature at twenty than others at thirty.

Then, again, the practical business side of life should be a governing factor in determining the exact time. The man who enters one of the so-called learned professions, for example, will generally speaking be longer in placing his feet securely on the financial ladder than the youth who leaves school at an early age to enter a business calling. And it certainly is not conducive to happiness for any one to marry before he has at least a fair prospect of being able to support a wife in a manner decently befitting the station of life to which she has been accustomed. The cynical proverb which declares that when Poverty comes in at the door, Love flies out of the window, has too much warrant in life-experience to be willfully ignored.

But even for those seemingly favored youth for whom financial problems have been solved in an earlier generation, reasonable delay is to be counseled, before entering on the road that has no legitimate turning. The man who did not have a fairly adequate sample of the varied phases of bachelor life, is sure sooner or later to feel that his education was in a measure neglected and to hanker after dangerous experiments to make up the defect at some later period of life. And the woman who did not have the "fling" of a normal girlhood will at times look regretfully upon that stage of her past, and may be prone to indulge a fatal yearning to see the world through the eyes of free maidenhood at an age when the guise no longer becomes her. Human nature is curiously uniform at base, and few of us like to feel that we have missed normal experiences that the generality of our fellows have found alluring. Certainly in so important a matter as the selection of a life-companion, every one would like to feel, in looking back from the vantage-ground of middle-life, that he used a certain amount of selective judgment, and did not merely accept, as a protozoön might do, the first mate that blind chance thrust within his ken.

Assuming that we are agreed that selection of a life-companion should be made only after reasonable years of discretion have been attained (but then not too long deferred), are there any rules or principles that may supplement the normal instincts in determining a choice?

Few questions, perhaps, require more delicate handling than that, if we would avoid infringing the deep-seated prejudices of our fellows. Time out of mind, in the shifting mythologies of many nations, Love has held secure place as a "divine" passion; and the idealistic literature of many languages has fostered the idea that hearts held under the spell of Cupid are actuated by impulses deeper and purer than the mandates of reason. There are those, indeed, who would ask us to believe that the romantic love of man for woman is a modern endowment, developed out of the chivalric customs of the Middle Ages. But no one who is familiar with the classical literature of Greece and Rome could fall prey to such an error. The words of the ancient poets and romancers, no less than those of the modern, tell of that intangible spell of gossamer that binds hearts as with cables of steel; of ideal passions that know not reason and brook not obstacles.

Shall the cold voice of science strive to dictate to this old-world passion? Assuredly, Yes. The passion of love has its foundations in the same bodily and mental needs that afford foundation to the other appetites, desires, and passions. Nature everywhere sets the model, and it is for civilized man, in proportion to his advancing culture, to improve upon the model. Man got on very well for numberless generations without rules for eating, for drinking, for exercising, for thinking—and remained a barbarian. In proportion as he came to apply rules, culled from the school of experience, he became civilized, cultured, intellectual, moral. But scarcely in any other field has he allowed the primeval instinct to hold sway so little influenced by the rules of organized knowledge as in this all-essential matter of the union of the sexes.

The average man shows less intelligence in selecting a life-companion, to become the mother of his children, than the average breeder shows in selecting sires and dams for his herd of cattle, his drove of horses, or his flock of sheep. And as for the average woman—it is scarcely considered modest for her to admit that she has a choice until she has been singled out for attention. Like the menial at the banquet of a king, she may not speak till she is spoken to.

"The world is getting on fairly well none the less," you say? But is it? What of the vast army of unfortunates making up the "submerged tenth" of our cities; the starving thousands and underfed millions; the unemployed and those unfit to seek employment; the criminals, the idiots, the insane dependents; the maimed, crippled, congenitally malformed and diseased; in a word, that great galaxy of unfortunates, doomed prenatally to be a burden to themselves and a menace to society,—whose very existence is a reproach to the boasted intelligence of our race?

When we reflect that these, and a multitude of others, one stage removed above their low estate, have been fore-doomed to an existence of misery by the misjudgment of their ancestors, we may well feel disposed to thrust prudery aside for the nonce, and to discuss the subject of the selection of a marriage partner with the same frankness with which we approach less important subjects.

First of all, then, let us strive to lay the ghost of that familiar bugaboo, which evidences itself in the world-old delusion that each human soul has only one companion soul—one only "affinity"—which it needs must find in order to attain the goal of happiness. If such were indeed the fatal fact, what possible chance would any individual have of finding this one companion soul among all the world's multitudes? Obviously none; and happy marriages would be rare indeed. But under actual conditions the case is far different from what this romantic delusion presupposes.

Rest assured that there are hundreds—or if you prefer thousands or tens of thousands—of persons of the opposite sex of approximately your own age, in any one of whom you might find a suitable and congenial life-companion. Indeed, the fact that these are so numerous supplies the one greatest danger to permanent marital felicity. For though you have eyes for only one to-day, there is always danger that a second may come within your ken to-morrow. One of the sternest facts that our existing marriage-system has to face, is the fact that man is not by nature a monogamous animal. It is the greatest triumph of mind over body that he has become so nearly monogamous in practise.

Let the universal experience of mankind suffice, then, to lead you to the belief that, however fervid your admiration for any particular individual of the opposite sex, there are countless others to whom you might be just as ardently attracted, did chance throw them in your way. The avowal of this belief would not gain you additional favor in the eyes of your sweetheart, I am aware; but its unavowed recognition may serve as a safety valve to your ardor and a balance wheel to your judgment. It may aid you, in a measure, to escape the dangerous thraldom of mere physical charms, and to consider the deeper qualities of heart and mind that are not always linked with these superficial adornments. Beauty is more than skin deep, but the eye of passion tends to linger at the surface.

Or, on the other hand, it may aid you in a sane attempt to reckon with undesirable physical traits, such as hereditary disease and the like, and to weigh these calmly against the desirable traits of mind with which their victim may be endowed. In a word, the calmer the judgment brought to bear on the selection of a life companion, the purer and more lasting is likely to be the affection that married life will accentuate and develop. And assuredly it will not be denied that marital happiness depends more upon the permanency than upon the intensity of mutual affection.

That union is not a true success in which the lovers do not feel, after say fifteen or twenty years of wedded association, vastly more of mutual dependence, mutual confidence, mutual love in the broadest and best sense of the word, than they felt when they went to the marriage altar. For now, after these years of association, it is no longer true that for each of these associates there are many affinities of equal value. Now it has come to pass that the years of mutual dependence have so welded and blended the two natures into mutual harmony that each is the one and best affinity for the other among all the multitudes. Now is the dream of the idealist, the vision of the romancer, justified. Now may we with reason speak of the two lovers as having each for the other an affinity that is all-compassing, all compelling, and upon the continued fruition of which the best chance for happiness of the two lives surely depends.

But he who would attain this consummation must understand that the time for the use of mature and sober judgment does not end with the final selection of a helpmate. The die is not necessarily cast beyond recall for good or ill when the marriage ceremony has been consummated. There is nothing even in the wisest selection that insures against possible conjugal disaster; and, on the other hand, there may be elements of possible success even in a very unwise choice. In either case, very much depends upon the environing conditions, and the attitude of mind with which difficulties are met.

The key to success in this regard is to be found in mutual confidence. The greatest success anywhere in life, says Emerson, is attained through "confidence and a perfect understanding between sincere people." Nowhere else is this truer than in regard to the relations of man and wife. The woman whose chief hold upon her husband is the magnetism of mere physical beauty, holds him by a chain that is more than likely some day to break. Physical passion is indeed the most powerful of magnets, but it is not the most permanent. The true cable of steel between heart and heart is to be found in that profounder sentiment called friendship,—albeit physical attraction forms assuredly one important strand of that cable.

Lose no time then in establishing with your conjugal companion those bonds of confidential sympathy that are the only secure foundations of permanent affection. Give full confidence and expect it, regarding your past, your present, and your hopes for the future. Let there be no hesitancy and no reservation. Be sedulous in your efforts to appreciate the point of view of your companion; for sympathy the human soul must have, and it were hazardous indeed to have this found in greater measure without the home than within its portals. Broaden your interests to include the tastes of your associate. Strive always to make reasonable allowance for the imperfectibility of human nature, and to remedy your own faults even while condoning the faults of the other.

And so it may come to pass that you are a more ardent lover at forty than you were at twenty, knowing year by year in fuller measure the joys of a companionship that is unique in its pleasure-giving power among the gifts vouchsafed to human kind.

Chapter XIV

THE COMING GENERATION

"There is one way of attaining what we may term if not utter at least mortal happiness; it is this—a sincere and unrelaxing activity for the happiness of others."

—*Bulwer Lytton.*

"Give a boy address and accomplishments and you give him the mastery of palaces and fortunes where he goes. He has not the trouble of earning or owning them, they solicit him to enter and possess." —*Emerson.*

XIV

THE COMING GENERATION

WHATEVER your conjugal felicities, you will not have tested to the full the pleasures of the marital state unless you have become a parent; much less will you have gained its fullest benefits in character-building. Not all who are otherwise fitted for marriage are justified in assuming the responsibilities of parentage, to be sure. Some day, I opine, our customs, even our laws, must take cognizance of that fact. But this phase of the subject has no present concern for us. We cannot here consider the case of the man or woman who, because of some constitutional or mental defect, may not or cannot produce offspring. Our concern is with the fortunate majority who are not denied that privilege.

I use the word privilege advisedly, but let us not slur the fact that a large proportion of parents-to-be do not at first recognize the matter in that light. Parenthood is for the most part involuntary, and a very large number of young married couples would avoid it if they could. Many of them rebel against it while it is in prospect, regarding it as intrusion on the freedom and the happiness of their lives. But this, in case of normal persons, only for a time. Gradually the point of view shifts. First the inevitable is accepted grudgingly, then welcomed doubtfully. Presently nature works anew her perennial miracle of transformation. Self interest yields tribute to the mighty instinct of race preservation. The egoists of yesterday have become altruists. Their entire point of view has changed. Life has new meanings for them. Henceforth there are pleasures in store for them that transcend all pleasures of past experience. Their tastes, predilections, desires, hitherto centered on themselves, and all-dominating, are henceforth to give place—in so far as the two are in conflict—to the one all-compassing desire for the welfare of their offspring.

Deep as the fountains of life itself is this parental instinct. It is the one absolutely altruistic thing in nature. It is the flower of the soul,—beyond all comparison the most beautiful thing in the world. They that have not breathed its perfume know not and can never know the profoundest joys of the spirit. Their cup of happiness can never reach the brim. Thank fortune they are but a small minority. Their one compensation is that for the most part they cannot even glimpse into the promised land beyond the confines of their egoistic circle. They know nothing of the new horizons visible from the heights of parenthood.

But if thus we signalize the joys of paternity, let us not attempt to overlook its tremendous responsibilities. Let us recognize that somewhat in proportion as these responsibilities are wisely and well met will the new generation continue to be a source of pleasure to the old. For there are possibilities of bitter sorrow no less than of transcendent joy in the relationship of parent to child. Which shall predominate, is a question that may largely be decided, granted average conditions of heredity, by the training that the child is given during those momentous formative years, when the entire organism no less than the brain is "wax to receive and marble to retain."

No other aspect, then, of the problem of happiness is more vitally significant than the question of the parental influence over the offspring. "How shall I rear my child?" is a question that for the wise parent takes precedence over every other.

Our comment on so broad a subject must of necessity be very general, or else confined to two or three seeming essentials. Whatever relates to the welfare of the child at whatever stage of its growth, from proper cutting of the teeth to the choosing of a profession, would be pertinent enough to our theme; since whatever makes for the child's betterment as to body or mind makes for its future happiness and the happiness of its parents. But for obvious reasons I may not follow here these various stages of development, even were I desirous of usurping the functions of nurse, physician, and pedagogue.

There is, however, one profound principle of action in dealing with a child, which covers a multitude of details, and which is, as I believe, of the very utmost importance, yet which most parents ignore or wilfully controvert, and to which, therefore, I shall chiefly confine attention.

The fundamental rule of action that I have in mind is this: To instill into the child's mind the inherent bias for honesty, the instinctive sense of justice, by treating it always, from earliest infancy, with scrupulous honesty and with unswerving fairness.

Now I suppose there is not one parent in a hundred who would not be disposed, on hearing this principle thus stated, to shrug his shoulders and say, "Why, that is the most axiomatic of platitudes."

Yet I affirm with much confidence that by no means one parent in a hundred—even confining attention to the ranks of the educated and intelligent—acts on the principle in question with even approximate consistency. And common experience will, I think, corroborate the affirmation, if we correctly understand our terms.

How often do we hear a parent evading the question of a child, or answering it with downright falsehood on the plea that it could not understand the truth, or that it is better for it not to know the truth.

And again how often do we see the fond parent engaged in the task of filling the infant mind with fictitious ideas about bears and black men, and fairies and gnomes of sundry varieties.

At a later day the process of unlearning these falsehoods must be a main feature of the child's education; the apparitions must be dethroned from their position as real beings. But usually these creatures of fancy refuse to be altogether banished, and linger throughout the life of the individual as shadowy superstitions, giving the mind a bias toward belief in the supernatural. Often they become rehabilitated in the mind of the adult, and accepted once more, slightly changed in form, as realities. Then we call them delusional ideas, and we say their possessor is insane; but we are prone to forget that these same delusions were the mental pabulum on which the budding mind was trained. Surely, in the light of the sequel, such training might well have been omitted.

"But," you say, I fancy almost in horror, "would you take away from the child all those delightful myths that have entranced children for untold generations? Would you condemn the mind of the child to a barren world of fact?"

To the first inquiry, I reply unqualifiedly, Yes. I would banish myths, superstitions, and all banishable falsehoods from the world of the child forever.

To the second inquiry, I reply, No, I would not confine the mind to the "barren" realm of truth, but I would confine it if possible to the wonderful, beautiful, entrancing realm of truth. What need is there to seek for wonders of fairy land when wonders of reality are all about us? The whole realm of nature is a fairy land of fact. The budding flower, the singing bird, the grass beneath our feet, the very ground—the whole world everywhere, is teeming with wonders, with mysteries, with bewildering realms for the exploration of the imagination.

That is no barren realm to which truth invites. The wonders of nature may be made as alluring to the child as the wonderful untruths of myth land. Without being led too rapidly, the child's mind may be made to imbibe delightful truths that it need not later unlearn.

It may from the very first be allowed to see the events of Nature as they occur in orderly, natural sequence, thus being permitted to develop its reasoning faculties unwarped.

Its eyes may be trained to see things that really exist; its ears to hear sounds that correspond to actual vibrations about it; and who shall doubt that such training will make for sanity?

How better than by such training may the mind be braced against the intrusion of those unreal visions that are almost always the precursors of mental overthrow? The mind trained thus will almost beyond peradventure become imbued with a spirit of healthful scepticism that will challenge every new sequence of events presented to it, and subject conclusions thrust upon it to the test of "clear, cold logic." It will be hard indeed to foist a delusional idea upon such a mind; and delusional ideas are the very essence of insanity.

As regards the child's more studied education, you will do well to restrain its precocity—wherein lies one of its dangers—never doubting that in so doing you are making for the final development and stability of its mental structure. To this end, and for many reasons, it is desirable that the child should be much in the company of children of its own age. Hence the public school has for such a child a large advantage over home training. Contact with many normal minds in the class-room, and normal bodies on the playground tends most helpfully to teach the child its true status in relations to its fellows; repressing that egoism which is one of its most dangerous tendencies.

You will do well to restrain further the egoism of the child by the avoidance of injudicious and indiscriminate praise; yet the hungering mind should not be embittered by the absence of judiciously worded and sympathetic approval. Here, as elsewhere, the premium is on the happy mean.

You will do well to inculcate such persistency of application as leads to true volitional strength. Teach the child to restrain and control its emotions, and on no account deceive yourself by supposing, as so many parents do, that outbursts of stubborn temper are evidence of "will power." In point of fact, they show an opposite state. It is the weak will that attempts to bolster itself with bluster and bombast.

It is really astonishing how parents and others can deceive themselves as to the true character of the mental traits of those dear to them. I saw recently a neurotic girl of sixteen, in the typical condition of that period,—hysteria,—who lay in bed month after month and except when her attention was diverted kept her muscles in a state of persistent spasmodic twitching. She declared herself absolutely unable to arise, yet she looked the picture of health, and in reality was physically capable of almost any exertion. Had she possessed but a modicum of the will power with which ordinary people are endowed, she would have arisen and gone about the affairs of every-day life in the every-day fashion. Yet her mother, totally unconscious of the true state of affairs, said to me with tears in her eyes. "Ah, doctor, it is perfectly wonderful the way that poor girl holds out. See how she controls herself! She could never have stood this had she not had a strong will."

Perhaps it will not be amiss, in this day of nervous disorders, if I say a few words more specifically about the home training of the child whose "nervous" temperament places it in danger of some such unfortunate culmination as that just outlined.

For obvious reasons, great heed should be given to hygienic measures, looking to the physical development of such a child. Its dietary should be made to include nutritious foods, to the restriction of the appetite-cloying sweets and other unwholesome things its own taste would select. Stimulants of every kind, including tea, coffee, and spices, should be absolutely interdicted. Systematic effort should be made to secure for such a child the exercise which the normal child gains unthinkingly in its games; for if left to itself, the nervous child often prefers to brood rather than play. And above all, good habits of sleeping should be inculcated from the first, for in later life insomnia is the perennial curse of the nervous temperament.

But the details as to all these things must vary with individual cases, and should be entrusted to the family physician. Indeed, the entire education of the nervous child should be accomplished under medical supervision, even though, as is quite commonly the case, the child is but little subject to attacks of acute illness, and is generally regarded as having more than average health.

In a word, an unceasing effort should be made to mould the mind of the nervous child toward the model set by the average mind of the average child,—the only normal standard. And let me again urge that this effort cannot be commenced too early. In infancy, the web for the woof of mind begins to be woven and what is then done can never be altogether undone. I could point you instances where a child of three years has had stamped on its brain the tendency to depraved habits of activity that have been the bane of the life of the individual as long as he lived. And it is beyond question that the mind of every child is similarly stamped with many a tendency that tells for good or evil all its life, during those earlier years when it is commonly supposed to be hardly a conscious personality.

The child's observant eye drinks in every sight; its quick ear nurtures every sound; and its mind develops ideas and interpretations long before its tongue could give words to its verdict. Conscious memory does not carry the adult back to that period, but beyond the depths of memory, the indelible record is there, and the man of fifty owes his personality in no small measure to the influences that surrounded his cradle. The warp of heredity and the woof of early training remain to the end as the foundation structures of every mind, however much the texture may be frayed, the colors obscured or blended by later experiences. When I reflect on this, and then witness the mental treatment that the average child receives from the average parent, I marvel that our race gets on even as well as it does.

Yet, on the other hand, we must not forget that even the worst home is better than no home at all,—better, for example, than the best public institution for child-raising, as the societies for Child Saving are always informing us. Even the most selfish persons show an amazing development of the altruistic impulse in dealing with their offspring. If the effort is often misdirected, to the detriment of the recipient, we must at least admit that the good intention counts for much. Meantime the observer, seeing the heights of self-sacrifice to which the average parent will rise, has his confidence perennially fortified as to the possibilities of human nature. With such material to work upon, we need not doubt that in due time the average parent may be taught to rear his or her children rationally as well as lovingly. Nor can we doubt that such rationality will make for the happiness of both parents and offspring, as well as for the betterment of humanity in general.

Chapter XV

HOW TO INVITE HAPPINESS

"It is easy in the world to live after the world's opinions; it is easy in solitude to live after our own; but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude." —*Emerson.*

"The wise man will not sin, though both gods and men should overlook the deed, for it is not through the fear of punishment or of death that we abstain from sin. It is from the desire and obligation of what is just and good."

—*Peregrinos.*

XV

HOW TO INVITE HAPPINESS

HOW to invite happiness? But, you say, each succeeding chapter of our work has dealt with one or another phase of that question. Quite true: but because of the specific text of each of those chapters there were numerous ancillary channels of thought which we did not enter, or, if entering, did not sufficiently explore. Some of these may now claim attention in a chapter of general import—under a caption that imposes no limitations.

Then, again, there are fields lying quite beyond the pale of our previous inquiries which we must not ignore. It is not enough that a man or woman should become a good observer with a clear-cut memory; should learn to think clearly; should attain good physical development and fair bodily health through attention to hygiene; should succeed in business, marry well, and rear a family of wholesome children;—all this, I say, is not enough to insure happiness, though of a truth this list of achievements must form a fine foundation on which to ground a happy life.

Suppose, for example, that a man of whom all these things are true, should come to feel, as he goes down the slope of the years, that his success in business has not carried him along the lines that he would now wish to have followed. Suppose he feels that he has all along pursued false ideals; has gone in an opposite direction from that which he would undertake were he to live his life over again. Then, surely, all the pleasure that might come from success is tinctured and in part neutralised by the bitterness of futile regret.

Suppose that our healthy and successful man of family finds himself practically without friends of similar tastes, inclinations, and sympathies to his own; while his lifelong attitude of mind has made him a discontented pessimist, wont to minimise the virtues and magnify the blessings of his neighbors. Such a man, though seemingly surrounded with the good things of life, knows not how to enjoy them. He cannot lay his hand on the key to the domain of happiness, though he be able to purchase every tangible luxury. If he seem to secure the form, he still lacks the substance.

For, as it chances, the substance of true happiness is for the most part made up of filmy abstractions—of ideas rather than of things; of friendship with our fellow-beings; the approbation of our kind; love of family; appreciation of the beauties of Nature and of art, literature, music, and the like. Honesty, honor, virtue, sympathy, conscience—all these are abstractions, yet all have their place among the social necessities. A world without them would be the world of brute or savage. It would not be a happy world in the modern interpretation of the word.

Hence it is that physical well-being and sensual pleasures are not enough. They play their part, and a most important part, but they are not the all in all. Even physical beauty depends in no small measure upon the profounder attributes of mind. A cheerful disposition and a sympathetic spirit can mould the features and light up the countenance in a manner that no external cosmetic can rival. It is scarcely too much to say that every thought writes its tell-tale lines on the face, that all the world may at a glance read the record of a life.

Witness, as extreme cases, the vacuous face of the idiot or of the hopelessly insane or the hardened visage of the habitual criminal, as contrasted, in different directions, with the shrewd profile of the business magnate or the serenely placid countenance of the philosopher.

Not all faces, to be sure, present so distinctive a mask, for most faces give the record of strangely composite lives. Yet in the main the balance for good or ill is struck and recorded there; and what is more, the popular reading of that record is usually correct. Individuals may make mistaken interpretations, but the aggregate verdict of a man's associates seldom does injustice to his true personality.

It behooves us then to give heed to the intangibles, to the abstractions, to the phases of success in life that are not concerned with externals and business practicalities.

First and foremost there is the matter of temperament—of individual bias. This enters into the problem both as determining the nature of happiness for the individual and as influencing his capacity for enjoyment. "Happiness is a matter of opinion, of fancy in fact," says Chamfort; "but it must amount to conviction, else it is nothing." That is to say, there is no such thing as unconscious happiness. If you do not think yourself happy, you are not happy. The state of happiness is essentially subjective. All the external conditions may seem favorable, yet the individual may be miserable in mind. Some persons are so constituted that they repel happiness; their attitude of mind seems antagonistic to it. They envy it in others, but for themselves they cannot grasp it.

Cultivate yourself away from this unfortunate attitude of mind. Train your children away from it. Strive to remember the blessings and to forget the woes of the past. Look on the bright side. Cultivate the belief that on the whole this is a pretty good world. Some days must indeed be "dark and dreary" for all of us; but most evils have their compensations. Search for these rather than brood over your ills. Strain your eyes to see that proverbial silver lining. It is amazing how much you can brighten your lot by merely "making the best of it."

I know a mother who has an invariable formula for the correction of her children when they are cross. She tells them to "say cabbage." The very absurdity of this meaningless phrase causes the child to smile through its tears or frowns, in spite of itself. Many an adult might learn to use the phrase to his great advantage. When you feel "in the dumps," out of sorts, disgruntled with life, angry with the world—say "cabbage!" Take on an aspect of cheerfulness. Hold your head erect. Quicken your pace. Manufacture a smile, as a good fighter does when he is hit and hurt.

Such attitudinizing—posing if you will—reacts upon the mind and tends to make for betterment of temperament. If you can smile when you are hurt, the pain is lessened. The outward show of fortitude will develop inward courage. And courage in itself is often the open sesame to the domain of happiness. It used to be said that John L. Sullivan, the famous pugilist, won half his battles before he had struck a blow, by the aspect of confidence that he presented as he advanced against his antagonist. Similarly George Bothner, the invincible light-weight wrestler, when he meets a heavier competitor, evinces his own confidence and tends to dishearten his adversary by repeating smilingly: "Oh yes, you are big; but I've thrown many a bigger man than you. You big ones lack heart; just wait and see how easily I shall beat you." Of course muscle and skill back up the confidence in these cases; but the courage in itself is an invaluable asset. If you can learn to meet a frowning world with a mien of like confidence, you will find your strength amplified and the obstacles weakened.

In all this, it will be observed, I am speaking of attitudes of body no less than of attitudes of mind,—the two being correlatives. The magic word here is Action. The distraught man cannot banish worriment by saying, "I will be cheerful." That would be lifting oneself by one's boot-tops. To think about being cheerful, even to talk about it, is often no less futile. The real remedy is to get up and go somewhere. Put yourself among people who know nothing of, care nothing for, your ills. Let contact with them divert your mind into new channels. Tell a humorous story, and laugh at the stories of others.

But this after all is only tentative. You must go farther. You must cultivate the habit of cheerfulness as a mental attitude. Remember that worry kills—not work. You must get away from the habit of worrying if you would not live a life of misery and grow prematurely old.

But how?

By an all-round perfectionment of character,—a building up of temperament along the lines of fairness, unselfishness, high ideals. But most of all, perhaps, by the cultivation of courage. Courage, to be sure, depends to a certain extent upon the circulation of the blood,—literally upon a strong heart; so mere physical development helps to secure it. But this is only a beginning. There is moral courage that transcends the physical; which latter, indeed, may often be confounded with bravado. Moral courage also is doubtless in a measure a matter of inheritance; but it is susceptible of great development.

Some one has said that courage consists in having done the thing before. There is a world of truth in that practical view. General Grant has told us how frightened he was on entering his first battle. The stage fright of the beginner is proverbial. But if you meet your first difficulties with bold face, even though the heart is sinking, you help yourself over the momentary obstacle and prepare yourself to banish like difficulties in future.

This applies not merely to the great trials of life, but to the little disagreeable tasks of every day. If you are accustomed from childhood to meet these half way; to face them squarely instead of shirking them, you are training in the best possible school for the development of courage. The great trials when they come to us are usually unavoidable; and just because they are unavoidable, most of us meet them with a certain fortitude. The weakest animal fights when pressed into a corner. The timidest man may go into battle, under stress of excitement, without fear. The most abject criminal may go to the scaffold with a show of unconcern.

But this is fortitude, not courage. The two are not altogether alien; but true courage is a trait of rarer quality and one that may be proved by more delicate tests. It finds exposition in the little affairs of every-day life; while at the same time its exercise in small affairs is preparation for its application to greater trials. Success or failure in practical life hangs perpetually in the balance of courage as thus tested and developed. But even short of this the cultivation of courage is one of the most direct and tangible aids in pleasure-seeking; for worriment and fear are the perennial banes to happinesss, and courage is their standard antidote.

Such development of self-control and self-reliance as is here enjoined, however, must obviously constitute, after all, only a negative appeal for happiness, through the banishment of anxiety, worriment, and mental disquietude. It remains to be pointed out, however, that the receptiveness to enjoyment, and therefore the possibility of a greatly enhanced sum-total of happiness in the case of any individual, may be almost indefinitely cultivated through direct stimulation and development of the æsthetic or emotional nature,—provided always that such development is carried out sanely and temperately, not with hysterical over-enthusiasm and sentimentality.

In proportion as the appreciation of things artistic—the æsthetic sense—is developed, man becomes capable of experiencing the most intense pleasure through the mere contemplation of natural phenomena, the observation of which leaves the uncultured mind absolutely unmoved. The trained eye roves a landscape, and the observer has no thought of self—he is lost in contemplation; yet a sense of pleasure suffuses his whole personality; he is oblivious of time and place; he makes no egoistic comparisons, is for the time being scarcely conscious of his own personality; yet the uplift of, so-to-say, impersonal emotion pervades his entire being.

Of closely similar character is the emotional uplift which the cultured mind experiences through scanning the cadenced words of a poem or through listening to the soul-compelling rhythm of music. In the same category, too, are the emotions associated with the turning inward of the mental vision, not toward the Ego as such, but across the broad fields of abstract reasoning.

The cultivation of such inward visions enables the person of developed artistic and philosophical temperament to transcend in considerable measure his seeming physical limitations. That it is possible thus to "rise above" the pleasure-dispelling influences of minor ills is matter of everyday experience. And the amount of self-effacement attainable grows in proportion to the strength and concentration of the mental action. The man of great reasoning power, when solving some profound problem, becomes notoriously oblivious of his surroundings—"absent-minded" as the saying is; a curious paradox by the bye, since the mind is never elsewhere so preponderantly present.

When the philosopher is under the spell of such a mental exercise, even so dominant an appeal as the bodily need of food fails to reach his conscious Ego. A Newton forgets to eat when the food is brought to him, a Descartes sits for hours on the side of the bed, half dressed, forgetting to complete his toilet, his mind in the clouds. Archimedes, intent upon his problem, heeds not the presence of the soldier who has come to take his life.

But while intense mental action thus seems to raise the actor above the plane of the emotions, it must not be overlooked that these are ever near-at-hand. Every form of constructive mental activity is accompanied by a certain sense of satisfaction, and the self-elimination of great mental effort may be associated with a sense of well-being that rises to the heights of ecstacy. So by another of those paradoxes that greet us everywhere in nature, it appears that the intending of the mind away from the Ego leads us finally in a circle back to the Ego: the attempt to attain self-forgetfulness through cultivation of objectivity of mind, leads in the end to the highest heights of egoistic happiness.

Obviously, then, the development of the mind along æsthetic and philosophical lines may serve on the one hand to effect a direct enhancement of the opportunities for happiness, and on the other as a warder off of ills. So, clearly enough, it is the part of wisdom to cultivate such mental and emotional development as will facilitate these ends. Learn to see the picture in the landscape, and so develop mental pictures that can be carried everywhere. Strive on occasions to direct the inward eye along by-paths of the mind that lead toward no practical result but only toward the solution of abstract problems of what the old Greeks called "being and becoming."

In other words, permit yourself, on occasion, to practise the invocation of visions and the dreaming of dreams.

Does this seem antagonistic to what I have said in previous chapters about keeping one's feet on the ground? There is no real contradiction. The most practical man may be also the most pronounced idealist; just as the best worker may be also the best player. In the final analysis, idealism and materialism may be reduced to the same terms. They are but two sides of the same shield.

"When I have lain on the ground for days and looked into the clouds," says Taine, speaking of Wordsworth's "Ode on the Intimations of Immortality," "I shall love this poetry." The critic spoke sarcastically, but there was better reason than he knew in his words. Well might it be wished that every seeker of happiness should now and again find time to "lie on the ground and look into the clouds" for a space in a receptive mood, "inviting his soul." Only let him remember that this is a pastime for the holiday, the vacation time, not the business of everyday life. Confidently may he expect that the cloud-forms bodying forth into pictures of the imagination will invite and point the way to new possibilities of enjoyment such as no development of the merely physical or even of the merely intellectual sense of well-being could bring to him. For now to the fully developed body, the well-trained thinking mind, has been added the soul of artistic, of spiritual susceptibility, sanely qualified, yet attuned to the "music of the spheres" with well-nigh infinite possibilities of response.

The æsthetic pleasures of a nature thus developed transcend the pleasures of the average personality as widely as the intellect of a Plato or a Spencer transcends the intellect of a Stone-Age barbarian.

As I reflect on the possibilities thus open to the generality of cultured minds,—possibilities that for the most part will never become realities,—I am led to recall an address that I heard once many years ago. The speaker was the late Professor Swing, his theme the possibilities of mental and spiritual culture. The words of his peroration ring in my ears as if I had heard them yesterday:

"Climb the heights," he cried, in tones that as I recall them were soft and melodious yet clear and penetrating as a bugle-call. "Climb the heights, and when you have reached the top look down upon the world asleep amidst beautiful and fragrant flowers."

And so, interpreting and slightly expanding the words of the great preacher, I say to you: If you would find full joy in living, you may well aspire to climb the intellectual, the æsthetic, the philosophical heights. Before you have gone far up the slope you will find yourself breathing a purer air than that of the valleys; you will feel the exultation that comes with the recognition of ever-widening horizons. And from your joyously attained coign of vantage you may look back with ever-increasing elation—yet never, I trust, without sympathetic pity—on the masses of your sometime associates, blindly groping there into illusory by-paths of evanescent pleasure and wilfully or ignorantly shunning the broad and inviting, even if steeper, highways that might open to them vistas of profounder and more abiding happiness.

Chapter XVI

HOW TO DIE

"The care to live well is identical with the care to die well."
—*Epictetus.*

"There is great reason to hope that death is a good."
—*Socrates.*

"No evil can happen to a good man, either in life or after death."
—*Socrates.*

"There is a child within us to whom death is a sort of hobgoblin; him too we must persuade not to be afraid when he is alone with him in the dark."
—*Plato.*

XVI

HOW TO DIE

ALL living is but a preparation for dying. That is the thought which the universal experience of mankind forces upon us, however unwillingly we may receive it. It is the one point upon which all philosophies, whatever their ulterior bearings, seem to be agreed. Whether or not it lead you to follow the light-hearted injunction of the old Hebrew to "eat, drink, and be merry," as least you cannot escape the inexorable logic of his assertion that "to-morrow you may die." The one great certainty of life is the manner of its ending. Sooner or later the mystery of death will crown the mystery of living.

Doubtless this certainty—which can never seem other than stupendous to the individual, regardless of his creed—has been of greater force in determining the activities and the beliefs of men than has any positive fact of the term of living. By some philosophies it has been regarded as a curse, by others heralded as a blessing. By some death has been regarded as the end of life, by others as the beginning of a new life-cycle. Sure though it be sooner or later to claim every mortal, yet to brave its imminence and openly to challenge it in the present has, in all ages, been regarded as the final test of courage. Rare indeed in any generation or among the votaries of any faith have been the individuals who have not at some periods of their lives shrunk from the thought of death—as the grim spectre threatened themselves or their dear ones—with the agony of haunting terror. Philosophy or no philosophy, most men (in Bacon's words) "fear death as children fear to go into the dark." There are but few who in their normal moments can echo sincerely the words of that cynic poet who summed up his indictment of life in the fierce challenge to

> "Count o'er the pleasures thou hast known,
> Count o'er thy days from sorrow free,
> And know, whatever thou hast been,
> 'Tis something better not to be."

No, assuredly, in the estimation of most of us, life brings more of pleasure than of pain; and death is a curse and not a blessing.

What, then, have we to do—since our theme is happiness—with this great universal dispenser of sorrow?

The answer is found in the pregnant words of Epicurus, "The care to live well is identical with the care to die well." Paradoxical though it seem, it is for the most part true that if we would die happily we must first have lived happily. For, be it understood, when a life has been rounded out to its full term of years and to the full measure of its possibilities dying becomes more natural, and often even more acceptable, than living. Death is not then a curse, but a blessing; and it is no misnomer to speak of dying happily.

But this, be it repeated, only when a life has been rounded to the full term of its years and the full measure of its possibilities; in other words, when the life has been well lived. And to live well, in this sense of the words, implies something beyond the mere attainment of direct personal happiness, the pursuit of which has of necessity been the chief theme of our preceding chapters. He who would die happily must leave behind him friends who will reverence his memory. That philosophic creed which purports to welcome oblivion, does violence to the profoundest instinct of the human mind. It is in the very nature of man's egoistic spirit that he should yearn for the sympathy of his fellows while he lives, and for permanent place in the memory of his kind after he is dead. And it is but another of those paradoxes that meet us everywhere, which decrees that every man shall stand a chance of having this egoistic desire gratified, somewhat in proportion as he puts aside his egoism in his dealings with his fellow men. He must forget self in order to be remembered by his fellows.

Our present theme, then, concerns that phase of happiness which may be derived from sympathetic contact with your fellow men; from associations of helpfulness rather than of rivalry. We have to consider your relations with your fellows, not so much from your standpoint as from theirs. We have to reflect that it does not so much matter what you think of your fellows as what they think of you; since, in our present view, the time must come when their opinions will determine the very perpetuity of your terrestrial existence, while your opinions will have been silenced forever in the tomb.

What, then, shall be your attitude of mind toward your fellows if you are to win their present approval and their lasting gratitude? I speak now of course to the average man, not to the exceptional one whose work of creative genius may give him fame regardless of character.

And to this average man I say: If you would live well and die well in the best sense of the words; if you would attain the highest happiness and the best rewards; you must be at heart an optimist, in tender sympathy with the needs, the aspirations, the weaknesses of your fellow men. You must curb your egoism, and give heed to those altruistic racial needs imposed by the very nature of civilized existence. If you are strong, you must pity, not merely dominate, the weak; reflecting that your strength and their weakness alike are accidents of birth and education over which neither of you had the slightest control. There is no more indefensible or more contemptible human trait, than arrogant pride of race, of physical beauty, of mental aptitude, or of any capacity whatever which has come to us through inheritance, and for which we are no more responsible than for the number of our toes or fingers.

Even those accomplishments that we have acquired through education, or through what we speak of as the exercise of our own skill or industry or frugality, should not make us vain or arrogant, whatever the natural gratification they afford us. For after all, these accomplishments are, in the last analysis, no less an endowment from our ancestors than those physical and mental traits that have just been referred to. We should, in simple logic, be grateful for the inheritance that has enabled us to win in life's race, rather than vain of what we term "our" accomplishment.

It is traditional that there are several generations of good blood behind every gentleman. And the man who speaks of himself as "self-made" is self-made only in a very narrow sense of the words. He, too, had ancestors stretching back in the ever-widening company of a geometrical ratio into the past; and whatever the misfortunes or deficiencies of one or two generations of his immediate progenitors, it is the net inheritance from those ancestors and not his own unaided effort that has made him what he is.

It does not follow, of course, that your optimism, your altruism, should be of the maudlin variety, which makes no distinction between bathos and pathos, between sentiment and sentimentality. Blind, unreasoning optimism, which closes its eyes to the facts of human nature, is the utmost folly. The indiscriminate extension of charity to whoever may ask it is worse than folly—it is an economic crime against society. But a wisely sympathetic outlook toward the real needs of the weakly; a well-reasoned willingness to extend the helping hand, are essential qualities in whoever would show himself a normal member of a civilized community. For without such concessions of the strong to the weak, civilization as we know it could not have developed; nor, having developed, could it be maintained.

It is not, however, the needs of the many, but your own individual happiness, that furnishes our present theme.

But the application is found in the fact that all your observances toward your fellows react upon yourself. Your attitude of mind toward your fellows is reflected in their joint attitude of mind toward you. The pessimist finds his neighbor always a disagreeable man; and rest assured the neighbor reciprocates the courtesy. The optimist finds agreeable traits in his neighbor. He likes the people with whom he comes in contact, even when habited in a community or amongst a people whose traits as a whole he does not approve.

Nor can the pessimist find safe refuge from the antipathy with which the community regards him, behind contempt for popular opinions; for nothing is surer than that, in general, the popular estimate of a man's character in the community in which he lives is a correct estimate. In Lincoln's famous phrase, "you cannot fool all the people all the time," and if the popular verdict of your community condemns you as a disagreeable person, you may well take the lesson to heart, and mend your ways. Assuredly if you do not, your name will not be a pleasant memory to posterity. For posterity accepts the verdicts of contemporaries, and rarely reverses unfavorable judgments.

There is no more deluded mortal in any field of endeavor than one who despises the estimates of his fellows, and falls back on the hope of posthumous fame. History tells us that there is rarely such a thing as posthumous fame for any one who did not have contemporary fame. Your contemporaries may do you more than justice, and posterity may refuse to accept at par their flattering verdict; but if your own generation can find nothing to praise in your efforts, posterity will never ferret out your merits. A posthumous bequest may, indeed, perpetuate your mere name but can never change the estimate of your character that was formed while you were living.

All this would be somewhat lacking in pertinency were it not that the love of approbation of our fellows is one of the most profound and universal traits of the human mind. No normal person would prefer that people should think ill of him; and most abnormal ones are equally sedulous to hide their delinquencies behind a mask of seeming creditability. Never the pessimist or cynic so hardened as not to shrink before the taunts and criticisms of his kind.

And if taunt and gibe were to fail, there remains the deadly weapon Contempt, which, as the French proverb has it, will pierce the shell of a tortoise. Moreover, the worst shaft of contumely is that which the unworthy man launches against himself. Whatever his pose before the world, rest assured that the contemptible person knows his own littleness. The acid of his own self-estimate eats into his soul. Though he smile and smile he knows himself to be a villain, even as the world knows it also; and there is no mirth in his laughter. That inward shadow of the spectre of ill-doing, like the outward shadow of his own body, no man may escape.

But, fortunately, just as inescapable is the inward radiance of well-doing. The deed of true charity, executed though it be so silently that the left hand know not of the right hand's doing, none the less surely gladdens the heart, brightens the mind, paints its glow of beneficence on the face even. The act of simple justice, free from the taint of prejudice or self-exaltation none the less suffuses the soul with the warmth of beatitude. No child so young that it does not instinctively recognize the difference between that warmth and the chill shadow of a selfish deed; no man so old or so hardened but that he too feels that difference. No sane man is so perverted from the standards of normal consciousness as not to know, in his heart of hearts, which line of action makes for happiness and which for misery; however ill may be his choice in practise.

"The just man is the freest of all men from disquietude; but the unjust man is a perpetual prey to it," said Epicurus; and what was true in his generation is no less true in ours, though more than half a hundred generations have intervened. Treat your fellow man with justice. All other admonitions are practically summed up and implied in that one.

For in order to be just, you must be free from prejudice; and freedom from prejudice implies the very highest flight of mental culture.

To be just, you must take into full account the antecedents of your fellow man: his innate capacities and weaknesses; and this implies sympathy and altruism.

To be just, you must recognize your own delinquencies, your own conflicting tendencies of character; and this will teach you charity.

To be just, you must be honest, honorable, upright in thought and deed; and as you follow the mandates of these mentors, surely you may not doubt that many another man is moved to action by the same impulses; hence your own rectitude will make you optimistic as to the innate rectitude of humanity. Meantime the example of your upright living will not be lost on your fellows. More than one will strive to emulate it; more than one will have his own sense of justice quickened and strengthened; and the community at large will grow in appreciation of the possibilities of human nature, will have their faith in humanity exalted by your example, will tend for the moment to forget the harsh precepts of a cynic philosophy, and to grow in optimism.

If you have achieved such an end as that, you have accomplished much in the world, though your share of what is called practical success be meagre. Of course it is better to succeed in your practical affairs as well. But if you have built such a character as that just suggested, you have not altogether failed, and you may await the oncoming of age with philosophic serenity. More than likely your broadened view has shown you vistas beyond the horizon of your early ambition, teaching you that the goals at which you aimed were by no means so important as they once seemed. Time deals kindly with more than one of us in that regard, else old age would bring far more of bitterness than it does.

In sober reality, about the only man who may sanely dread the oncoming of age is he whose ambition is still fresh and whose life-work, though well under way, is still far from fruition; and even he had assuredly better be about his work, instead of wasting time in vain regrets and futile apprehensions. If your experience has not made you better able at forty to go ahead with your useful work than you were at thirty, then it is more than probable that you would waste the time over again had you the opportunity to do so. Hence the regret of the man of forty that he is not ten years younger—a regret one so often hears expressed—is not only foolish because of its futility, but implies a wish that would probably be void of results could it be realised. There are as many hours in the day for the man of fifty as for him of twenty. And to-day is the only time of which either the one or the other can be sure; to-morrow may never come for either. Life therefore has as many certainties at one age as at another—and you cannot hypothecate mere probabilities.

Where, however, death approaches untimely, as from accident or disease, while the worker is still in his prime and his work unfinished, we may freely admit that the case is hard. As Henry IV. of France lay dangerously ill, he said to his minister Sully: "My friend, I have no fear of death; you have seen me brave it in a thousand instances; but I regret losing my life before I have been able, by governing my subjects well, and alleviating all their burthens, to demonstrate that I love them as my children." That monarch's deeds were consistent with his words, as he was spared for a time to demonstrate, before being snatched away, still prematurely, by the assassin's bullet. In such a case, if death is inevitable, there is no refuge except in the philosophic reflection that some other hand will doubtless do as well the work that you are forced to lay aside; a reflection to which the history of every department of action and of thought gives fullest warrant, yet which may be granted to lack something of satisfaction to the individual who must apply it to his own case. Death by violence or disease, where it attacks a worthy worker, is not a natural phenomenon, but a breaking in on the orderly scheme of things, which we must be permitted to think a misfortune for humanity.

We must remember, on the other hand, that many a man thinks his work incomplete, when in reality his useful message to humanity has been delivered in full. St. Jerome tells us that "at one hundred and seven years of age, Theophrastus lamented that he was to die, just when he began to know how to live." Cicero relates, further, that Theophrastus "complained of nature, as he lay upon his death-bed, for having given deer and crows so long a life, which was useless to them, while she had allotted men an extremely short life, though it was of the greatest consequence to them to live long; since, if the age of man was extended to a greater number of years, their lives would be improved by an universal knowledge, and all arts and sciences brought to perfection."

But in reality it is hardly likely that Theophrastus knew any better how to live at one hundred years than he did at fifty, if indeed so well. And as to granting man a longer life, while that might seem desirable if he could retain his faculties and the working energy of his youth; yet, as physiological matters actually stand, it may be questioned whether most men who live out a normal term of years would add anything further to the world's knowledge or benefit could their lives be extended by another decade. Some men, as we have seen, produce good work in what Alexander von Humboldt called their "doubtful years"; but, on the other hand, many a famous man has been led, through the weakness of age, to perpetrate senile views that were positively harmful, militating thus against the value of an otherwise useful life.

As to the sorrow that aged men feel in leaving the world, the case of Theophrastus—if indeed the report of his lamentation be not apocryphal—was no doubt exceptional. Most men of venerable years do not cling to life with quite the eagerness of youth; and for such as still find joy in living, there is always the consolation of Cicero's true assertion that "no man is ever so old but that he thinks he may live another year."

Not many, perhaps, are ready positively to forego that hypothetical year, when put to the test. But in the end this is decided for us, mostly with little warning; and when the summons is felt to be final, but few rebel in spirit.

Even when death comes prematurely through disease or violence, the man that has lived well will not lack knowledge or fortitude to die well. It is recorded that as Anne de Montmorency, the French Marshal, lay suffering the most excruciating torture from his wounds, a Cordelier exhorted him to patience and resignation to the will of Heaven. "Ah, my good father," he replied, "can you suppose that a man who has been able to pass a life of near eighty years with honor, cannot tell how to terminate properly the last quarter of an hour of it?" And this fortitude is as typical as it is admirable.

Any man may rationally enough shrink from the thought of a death by violence, prepared though he be to meet such death with fortitude should it come. This shrinking, however, may represent not fear of death, but fear of pain. Here, as indeed elsewhere, it is, in the words of Seneca, the paraphernalia of the death-bed that terrify, rather than death itself. "*Der Tod is nichts, aber das Sterben ist ein schändliche Erfindung*,"—Death is nothing, but dying is a terrible experience,—says Heine, paraphrasing the words of Seneca. But in general it is the prospect rather than the reality that is terrible. When the last hours come, as a rule they bring with them the benison of unconsciousness.

Even where consciousness is retained to the end, the last hours are rarely, in case of natural death, hours of suffering. "If I could hold a pen," said William Hunter, the anatomist, in one of the last moments of his life, "I would write how easy and pleasant a thing it is to die." And these words but give expression to what is perhaps the normal experience of mankind. For the vast majority of the human race, dying proves as painless a process as the falling asleep that they have practised every night of their lives.

Thus to liken dying to falling asleep is perhaps the most hackneyed of all comparisons; but from its very obviousness we can no more escape it than could our forebears. "Death and his brother Sleep," have sung the poets of every age and in every tongue. Nay, prehistoric man, before men knew they were poets or philosophers, noted the likeness, and built on it the structure of a philosophy of superstition, ages before the word philosopher came into being; and the thinkers of all succeeding eras have expanded and elaborated the idea to meet the needs of their diverse systems. Nor can it be said that the accumulating wisdom of the ages has added much to the force of the simple primitive comparison. But the wise men of the later time differ from the savage in this—they no longer fear that "dreams may come" to break in on the serenity of the long night of death.

If death then be but "a sleep and a forgetting," to fear it as one fears a conscious ill is the very negation of reason. The normal man falls asleep some 365 times each year, or more than 25,000 times in the course of a normal life. Each of these thousands of periods of sleeping, lasting on the average seven or eight hours, has been a time of virtual oblivion, during which the sleeper was totally unconscious of the world-activities that were moving full tilt in the opposite hemisphere to that in which he chanced to lie. One-third of his entire life has thus been passed in a state that, so far as consciousness—the essence of volitional being—is concerned, was the negation of living. What matters it if one morning he fail to awaken at his accustomed hour?

What matter if his eight-hour term of oblivion be lengthened out from time to eternity?

The logic of every age has answered that for the individual himself it can nothing matter. Sooner or later his long sleep will come, and for himself it can matter little whether it be the present night or another that is lengthened beyond its fellows. For himself—aye; but what of his friends, of the dear ones perhaps dependent upon the fruits of his daily industry? What man lives solely for himself? The average man falls asleep to-night to gain strength and energy for to-morrow's task, which must needs be done if his family is to be supplied with the necessaries of life. Shall we say that for these dear dependent ones it does not matter whether it be to-night that he enters on his long sleep? It would be but a visionary philosophy that could make that affirmation.

For man the social animal, then, it does matter—and vastly matter—when death comes. Whoever has dear ones dependent upon him for bodily support and for mental and spiritual stimulus and comfort, is not a mere individual, but rather a component part of a social organism from which he cannot be prematurely withdrawn without injury to the remaining parts. Such a person may rationally shrink from premature death; nay, he would be irrational if he did not fear it. But, on the other hand, knowing that should the "inexorable summons" come his fears and his desires will avail him nothing, it is the final test of his rationality that he waste no time in idle lamentations, but strive to the utmost to make such material provision for those dependent on him as will minimize the evils of his withdrawal, should withdrawal be inevitable. I know not how the man that has not made provision—to the best of his ability—for the future of his dear ones, can enjoy a night of normal slumber; much less should such a delinquent be able to contemplate death with any show of serenity. His surely cannot be the calm resignation of the man who knows well how to die because he has known well how to live.

But however full your provision for those dependent upon you; however ripe the measure of your living; however painlessly you sink into the sweet forgetfulness of peaceful slumber; your withdrawal from companionship must be a grief to those that hold you dear, against which no philosophy can for the moment avail them. The measure and the permanence of this sorrow must, indeed, be somewhat proportionate to the measure of your right-living. But with proportionate sincerity, as time brings consolation and the memory of your life becomes a pleasant reminiscence, will your sometime companions enshrine in their hearts the words which Callimachus inscribed long ago to Saon of Acanthus, son of Dicon:

> "He lies in a sacred sleep;
> Say not that men of virtue die."

Appendix

AMPLIFYING CERTAIN ASPECTS OF THE FOREGOING TEXT

"Happiness lies all in the functions of reason; in warrantable desires and virtuous practice."

—*Marcus Aurelius.*

I

WHAT TO EAT

[An amplification of certain aspects of the questions dealt with in the Chapter on Physical Needs, pp. 19–38.]

IT may be well to recall that there are two quite different ways of regarding the food problem. One may eat to live, or one may live to eat; and one's way of estimating the food problem will differ somewhat according to the class one belongs to. Yet after all, the difference is more seeming than real; for over-indulgence destroys the capacity for enjoyment; so in the end the man who lives to eat will get more pleasure from his palate by showing it some consideration. Moreover, the individuals are few who wholly despise the pleasures of the palate. Indeed, the physical appetite is too deep-seated and too essential to be ignored in practice, even by those who mentally deplore its existence.

To appreciate the character of the insistent appeal, and to understand the real share of food-taking in the economy of the organism, it must be recalled that the human body is a physical machine, to which the familiar physical laws of the conservation of energy apply as fully as to any mechanism of man's construction. Every self-impelled motion of any portion of the body—be it but the flick of a finger—is accompanied by the destruction of a portion of organic tissue, and by elaborate chemical transmutations. Such chemical changes, stated in the least technical language, constitute a virtual burning of fuel. Oxygen, brought from the lungs by the red blood corpuscles, unites with certain matter of the tissues, with a resulting liberation of energy, partly measurable as muscular force, and partly as heat.

The product of this oxydation—ashes of this combustion—are no longer available for the purposes of bodily nourishment or energy-production; indeed, they are not merely useless, they are positively detrimental. If allowed to accumulate in the tissues or the blood, they are noxious poisons, quickly overpowering the organism and destroying life. The uræmic poisoning of certain kidney diseases furnishes a well-known case in point.

It is familiar experience that the body may exist for long periods without exerting the muscles; so it would be possible, on this score, to reduce the necessity for fuel almost indefinitely—though not quite indefinitely, since heart muscles and the muscles of the respiratory and digestive systems are perpetually active. But, however inactive, the organism is of necessity giving off heat (unless kept in a medium at a temperature that would be unendurable) and this heat must be supplied by the burning of fuel, else the bodily temperature as a whole would quickly sink below the level at which life may be maintained.

One of the most remarkable of physiological facts is the narrow range of temperature maintained by the body in health. Day and night, summer and winter, the organism scarcely varies by so much as a single degree centigrade from the same normal level. The interior of the body is indeed warmer than the surface, but the swiftly flowing blood tends naturally to establish equilibrium. Even under stress of the maladjustment due to disease, the range of temperature is only a few degrees,—rarely more than six.

This of course implies the existence of bodily mechanisms for regulating of the elimination of heat. The skin, with its perspiratory apparatus, is the most conspicuous of these. When the pores are open and perspiration is active, the evaporating liquid exerts an enormous cooling influence. On the other hand, when the pores are closed and the excretions reduced to a minimum, the skin serves as a relatively impervious barrier, and the bodily heat is conserved to a remarkable degree. Yet at the very best there is a considerable loss of heat, and the body would quickly cool below the life-line were the combustion-fires to be quite extinguished.

Such physiological explanations as this serve, after all, only to give technical expression to the familiar knowledge that the body must be perpetually supplied with food. It required no scientific analysis to teach mankind that elementary truth. Yet it is always of interest to know the *whys* of the most familiar phenomena, and, moreover, it is always possible that the explanation of an old truth may put us in line of discovery of facts that are not so familiar.

In the present instance, for example, we shall be better able to apply intelligent discrimination between seemingly conflicting practical experiences, if we bear in mind the underlying character of that need which expresses itself as a desire for food. To the same end, it will be well to carry our physiological explanations one step farther, noting the chemical character of the materials which supply mankind with food. For this purpose, we may for the moment overlook the ever-present supply of gaseous food in the form of oxygen, that is taken into the body through the lungs, and the equally essential liquid food-stuff in the form of the universal solvent, water.

Paying heed rather to the solid and semi-solid substances that are more conventionally thought of as food-stuffs, we find that these—great as is their seeming diversity—are all susceptible of being sorted into three classes, which the physiological chemist designates (1) proteins, (2) carbohydrates, and (3) fats.

Proteins, or albuminoid substances, are such as contain nitrogen combined with oxygen, carbon, hydrogen, and sundry other elements in lesser quantities. The essential condition, from a chemical standpoint, is the presence of the nitrogen. Proteins are often spoken of as nitrogenous foods. Familiar examples of this class of food are furnished by meat of all kinds; eggs and milk also contain albuminoids, and so do such vegetables as the cereals, and, in particular, lentils, peas and beans.

Carbohydrates are so called because they are composed of carbon, hydrogen, and oxygen. The sugars and the starches are the typical carbohydrate foods.

Fats are akin to carbohydrates in composition, in that they are made up of carbon, hydrogen, and oxygen, and are devoid of nitrogen, but they differ in molecular arrangement of the elements, as their obvious physical qualities testify to the most casual observer.

Proteins are direct suppliers of muscular waste; carbohydrates and fats are suppliers of energy, and may be stored for future use in the form of fat.

It is an elementary physiological truth that a portion of each of these three types of food-stuffs must be included in a well-rounded dietary. It is possible to state pretty definitely how much of each of the principal chemical elements should be included; but such a citation has no practical importance for the generality of people. It is really more to the point to recall that countless millions of beings solved the problem of food measureably well in ages when physiological chemistry did not exist, even as a name, and that countless individuals to-day are led by their mere instincts, and the accumulated experience that is matter of everyday knowledge, to altogether satisfactory results. Experience, after all, must be the final arbiter. But when empirical experience walks hand in hand with scientific analysis, each helping the other, we may hope for the best results. Only we must beware of scientific dogmatism, no less than of empirical dogmatism.

Glancing back into the pre-scientific past, then, we find that a vast majority of our ancestors were of omnivorous food habits. The teeth of man have not changed essentially in form since the pre-historic period, and undoubtedly the teeth are those of an omnivorous animal. This does not prove that man should necessarily indulge in a widely varied diet to-day, but it offers at least a suggestive hint.

The diet of primitive man doubtless depended largely upon opportunity. In tropical and semi-tropical latitudes—where we may suppose our primitive ancestor made his home—fruits and nuts were to be found in relative abundance, suitable for food without artificial preparation. Eggs of birds and reptiles, and the flesh of young birds and animals were also obtainable, as were numerous species of snails and large insects; and along the rivers mollusks and fish could be secured. So from the very first man's appetite was pampered by a varied diet.

When man became a full-fledged hunter and fisher, and wandered to the north, he doubtless disturbed somewhat the balance of his dietary by the increased proportion of proteins represented by the flesh of his quarry. But, on the other hand, he presently became an agriculturist also, and the cereals and vegetables thus added to his food-supply tended to restore the balance, by supplying an abundant store of carbohydrates.

Before the dawn of history man had become an efficient herder and agriculturist; his herds comprised the ox, sheep, and goat. The jungle fowl was not yet known in the Mediterranean region, but ducks, geese, and pigs had been tamed; rye, barley, oats, wheat, and rice were under cultivation, together with a considerable number of garden vegetables that are still in vogue.

It must be recalled, however, that the eastern hemisphere did not supply the turkey, and that the very important white potato and Indian corn—not to mention tobacco, which is at least next door to a food-stuff—are also exclusive products of the Americans. The introduction of the potato, in particular, in the sixteenth and seventeenth centuries led to one of the most important changes in the diet of the average man that have taken place within the historical period. It supplied a cheap, starchy food, such as had not hitherto been available, and doubtless aided in decreasing the proportion of meat in the average European dietary. Nevertheless, meat was the predominant food-stuff long after the potato was introduced.

As to sweets, which form so constant a part of the average diet to-day, the ancient world was virtually restricted to a single kind—namely honey. The familiar Hebrew phrase "a land flowing in milk and honey" suggests the esteem in which this native sweet was held. Among the Greeks, honey was one of the most important commodities of commerce; Attic honey, supplied by bees that fed upon the wild thyme on the hills of Hymettus near Athens, being particularly celebrated. Throughout the Middle Ages honey continued to be the standard sweet. Sugar, made from the juice of the cane, is a strictly modern luxury,—or necessity,—and beet sugar, which now greatly predominates over cane sugar in the markets of the world, is a development of the late nineteenth century.

The supply of honey available in any age was probably always limited, as compared with the commercial output of the modern sugars.

Precise statistics as to the matter are not available, but it is incredible that the honey crop can have been more than a bagatelle compared with the millions of tons of grape sugar and cane sugar that represents the yearly output of our own time.

We may all suppose, then, that sweet carbohydrates have a larger share in the average dietary of to-day (particularly in America) than they ever claimed in the dietary of any earlier generation. It is possible that this change will have an appreciable effect upon the physique of our race; but the exact nature of this effect may not safely be predicted.

Meantime, it would appear that if changed dietetic conditions have had any influence upon the physical development of our race, it has been in the direction of increasing the average size; since it is affirmed that the average upper-class Englishman of to-day cannot wear the average armor of the Middle Ages. As to general health, as tested by average length of life, of course that is incomparably better; but we must guard against drawing sweeping conclusions from this, since the banishment of plagues, through preventive medicines and perfected hygiene, reasonably accounts for most if not all of the improvement. For example, it was no change of diet, but the discovery of Jenner, that veritably banished small-pox—a disease which, in the days of our great grandfathers, claimed one-tenth of the whole population as its victims.

Such facts as that warn us against dogmatism in attempting to draw lessons from history. About the only safe conclusion that a study of the dietary conditions of our ancestors seems to warrant, is that the generality of mankind at all stages of human development have eaten as great a variety of foods as they could secure, guided by the palate only, and without concerning themselves as to dietetic theories, and have thriven measureably.

Doubtless there have been faddists in all ages who argued for limited diet. We know, for example, that Pythagoras, one of the earliest of Greek philosophers, was credited with advocating a strictly vegetable diet, away back in the sixth century B. C. But no civilized people have ever carried out such an experiment on a large scale; and to this day the advocates of vegetable diet are obliged to depend upon theories, unsupported by the only kind of evidence that could really be convincing.

No one questions that it would be possible for mankind to subsist on a vegetable diet,—since such a diet could be so selected as to supply all the necessary elements of nutrition,—but the only races that actually put the matter to the test of practice are certain Polynesian savages of a very low order, who certainly do not offer an inspiriting example.

It has been pointed out that these vegetarian savages are cruel and ferocious, whereas the Esquimaux, who live on an almost exclusively animal diet, are notoriously mild and peaceable in disposition. But climatic conditions are so obviously a possible factor in determining the temperament of these races—one of which inhabit the tropics, the other the arctic regions—that sweeping conclusions must not be drawn from the otherwise suggestive facts.

II

BRAIN AND MIND

[Amplifying the text of Part II: Mental Aspects of the Problem of Happiness, pp. 81–132.]

Cogito, ergo sum—I think, therefore I am. Such is the classical phrase in which the great Frenchman Descartes summed up the essence of his philosophy. At first glance perhaps the full logic of this proposition is not apparent; but the more you cogitate the phrase the more profound it will seem. "I think, therefore I am"—when you reflect on it fully you will see that you have no other means of demonstrating your existence. Could we not think, quite obviously we could not know of our own existence, or of any other existence. We should be as non-sentient as sticks or stones.

"None the less we might still exist, just as the sticks and stones exist," you may say. True enough, but you could not prove that you existed, which of course is the sense in which Descartes' phrase must be received.

Quite in keeping with the egoistic character of this postulate of Descartes, is the truth—which at first thought seems a little startling, but which is seen on reflection to be almost axiomatic—that each of us can really know nothing except by inference of any mind other than our own.

When I speak of the human mind, I am really drawing inferences from my own mind. I can by no possibility gain any direct knowledge as to your mind, nor can you gain any direct knowledge of my mind. We cannot see or hear or touch an idea; we can experience it in our own mind, but we cannot in any direct way experience the idea of another person than ourselves.

What we know then of other minds than our own is strictly inferential. The brain-cell which is the essential organ of mind can telegraph out and order certain muscles to move in this way or that, and this is its only possible way of communication with the world. Through the movements thus attained come the gestures, actions, and language which are the only outward symbols by which mind manifests itself. It would be possible, by cutting only a few nerve channels, to shut off the mind absolutely from any outward expression of its feelings and ideas. Indeed, disease sometimes does this, and the victim must lie motionless, unable in any way to give expression to his desires.

But under ordinary circumstances, these channels of outward expression are in constant operation, and the mind is communicating with the outside world incessantly. And from the peculiarities of the action, gesture, and speech that are the media of this communication, we infer that other minds are like our own. This similarity would not exist had not the individuals who manifest it descended from the same races, and had not their ancestors from long association learned to use the same symbols for the same ideas. But since this is the case, we have the strongest possible warrant for assuming that the gestures, and actions, and words of others with whom we are associated are prompted by just such ideas as are in our own minds.

This, however, is only an inference. When you and I touch this table together, I can never know positively that it feels to you as it does to me. But I have the strongest possible inferential warrant for assuming that it does, and the entire structure of our society is based on this assumption.

Reasoning along lines suggested by such an analysis as this, the idealistic philosophers have developed a theory that nothing exists but mind. "There is no such thing as matter," they declare, "independently of sensation of mind; there is no such thing as color save as the eye interprets certain conditions; similarly there is no sound save for the ears; no odor save for the olfactory organs." This method of reasoning has its allurements, but it lacks the suffrage of common sense, and we need not follow it. The powers of mind are quite wonderful enough without attempting to stretch their bounds. But, on the other hand, we may freely admit the truth of the poet's contention that "There's nothing good or bad but thinking makes it so."

On the opposite side of the lists of controversy from the Idealist stands the Materialist, armed with the belief that nothing exists but matter; or—for it is difficult to state philosophical beliefs fairly in a phrase—at least that matter is paramount, and that all known phenomena are but the observed effects of the interactions of matter. "The brain secretes thought as the liver secretes bile" is the famous dictum of Cabanis, thrown full at the heads of the old school of idealists.

With the pretty turmoil that such an announcement naturally elicited, we have no present concern. In the philosophical byways there are still to be seen and heard reminiscences of the struggle, and no cautious person dare affirm that the problem of the ultimate relations of matter and of the forces that operate on matter has been solved. But, on the other hand, one hazards nothing in affirming that the proximal problem of the dependence of mind upon the functionings of the brain—which for our present purpose is all that concerns us—is settled beyond the range of dispute. No one to-day questions that the brain is, in a very tangible and real sense, the organ of mind; and that upon the proper action of this organ depends the integrity of our thoughts and feelings.

Waiving all remoter philosophical implications, the acceptance of this belief implies a long advance upon the opinions of our ancestors only a few generations removed, who held that the sole function of the brain is to cool the blood, and that the seat of mind is to be found in the heart. Now we know that, though the heart supplies the all-important blood, without which no functioning is possible, yet that the direct and proximal organ of mind is the brain. If we are to think right, our brains—not our hearts alone—must be right.

Any physical perversion of the brain is sure to be recorded in a perversion of the mind.

So much as this, stated in general terms, is doubtless familiar knowledge nowadays to every intelligent reader; but I suppose there are many readers who have but a very vague idea as to the anatomical conditions that exist in the brain, and upon which the activity of mind depends. It may not be amiss, then, to supplement our studies of the action of mind with a brief outline of the underlying brain conditions. Such a study will perhaps make it easier to grasp the import of a simple analysis of mental processes themselves.

At the outset, then, it must be understood that the brain is in effect an aggregation of nerve ganglia, and that such an aggregation is found only among the animals that are relatively high in the organic scale,—that is to say, among the vertebrates. With the very lowest vertebrates, the collection of ganglia makes up a spinal cord that is but slightly enlarged at its anterior end to form a brain proper. But as we come up the organic scale, this anterior enlargement of the spinal cord becomes more and more conspicuous (and the animal correspondingly more intelligent), until finally in the case of birds and mammals it is relatively enormous in size. Man, at the head of the scale, has a brain that is not only relatively the largest of all, but that is actually larger than that of any other animals except the whale and the elephant.

The essential structures of the brain are minute cells, and fibres that connect these cells with one another and with the organs and tissues lying without the brain. These essential cells are so infinitesimal in size that many millions of them lie imbedded in each cubic centimeter of the brain substance. We need not here attempt to surmise how they perform the work that is laid out for them, but we may tell pretty definitely what that work is. The fibres from the cells run out to the periphery of the body, and there become a part of all of the tissues that are in contact with the outer world. For convenience we may think of these fibres as telegraph wires that convey messages from the outer world to the brain-cell. If any part of our body comes in contact with an exterior object, we at once feel that the surface of that object is soft or hard, as the case may be; that it is cold or warm, rough or smooth, and the like. We seem to learn all this instantaneously, but in point of fact we do not know it until the impressions received at the finger-tip, for example, have been transmitted to the brain, and there interpreted by the brain-cells. In the process of this interpretation, the mind appears.

The same thing is true of all impressions that we receive through the organs of special sense. The eye does not see, the ear does not hear, the tongue does not taste, the nose does not smell; but each of these organs receives impressions from different kinds of forces of the external world, and transmits them to the brain; and it is the tiny brain-cell that develops the complex sensations in question. The superficial organ of sense is like the transmitter of a telephone. The nerve fibril is the transmitting wire. The brain-cell is the internal transmitter, back of which stands

Mind, the sentient being, listening to the message that the complex apparatus brings from the outer world. Every part of this apparatus must be in good working order, or the message will either fail to come at all to the mind, or will be a distorted one.

To make the comparison complete, it must be known that the brain-cells that thus receive messages from without are also in constant communication with one another through the medium of a vastly complex network of fibres that merely pass from one cell to another, without extending beyond the confines of the brain. Thus the messages received from one source are constantly checked, as it were, by comparison with messages from other sources; such association being equally essential to the development of correct interpretations of the various and sundry messages. By means of the apparatus of associational fibres and cells, it is possible also to send out messages from the brain to the periphery of the body,—along another set of exterior wires,—ordering certain sets of muscles to contract, to meet what the mind conceives to be the needs of the body.

Such, then, is the physical sub-structure beneath the mind. Such is the apparatus that must functionate in order that the curious process we call thinking may be effected. But, after emphasizing thus the interdependence of mind and body, we may revert to the earlier point of view to the extent of reaffirming that, after all, the brain and the body in which it rests are of no importance in and for themselves. They are solely important as being the dwelling-place of the mind.

Physical beauty, for example, is of no consequence except as the mind interprets it;—except as it gives pleasure to the mind of its possessor and to the minds of others.

Physical infirmity could be of no consequence save for its effects, direct or indirect, in curtailing the happiness of the afflicted individual or his fellows. In a word, then, I repeat, the conditions of body and brain are important not in and for themselves, but only because of their essential influence on the all-important mind, which alone interprets the conditions of well-being or of ill-being; which alone knows anything of happiness.

III

[THE TEST OF AGE

[Amplifying the text of the chapter on Youth versus Age, p. 165, *seq*.]

Apropos of what is said on p. 170 about the hour as the better unit for computing age, rather than the year, I recall once hearing a man of alleged immature years argue this standard against a critic who had contemptuously assured him that he would "know more when he was older."

"But, my dear sir," said the man of twenty-five, "I am already older than you."

"Nonsense," replied the other; "I am forty-three and you are not yet thirty."

"Forty-three what?"

"Why, years, of course."

"But what have years to do with the matter? Yonder tree is probably a century old, but I presume you will not admit that it is wiser than you are. To measure a man's life with years is like measuring diamonds in a bushel measure. Now you don't estimate diamonds that way; you don't even weigh them by ounces or drachms or grains. Your unit is the karat, which is a mere fraction of a grain. In the same way the life of a man should be estimated not in years or months or days even, but in minutes or seconds. Take care of the seconds and the years will take care of themselves. Let us, however, measure even by the crude standard of hours, and I shall still be able to show that I have really lived longer than you have."

"Go ahead," said the other incredulously.

"Well, to begin with, what are your hours of sleep?"

"I retire about ten and arise at eight."

"Very good. I retire at eleven and arise at five; so I take six hours of sleep to your ten, gaining four hours of waking life each day. Now how much time do you spend at meals?"

"About three hours."

"And I not over an hour; so I gain two hours more. What about games? I notice that you play billiards and cards and checkers a good deal."

"Yes, I always play one or another game for two hours in the evening."

"During which time I am studying some informative book. Therefore I must claim those hours also. I don't say your time at the games is absolutely wasted.

Perhaps that recreation is necessary for your health even; but I do not require that kind of diversion, and you will hardly claim that your evening at euchre has added much to your knowledge of life or to your real working efficiency. In a word, then, your hours for work or study are reduced to nine a day, whereas mine number seventeen, or almost twice as many.

"I think, then, that you can see where the argument lands us, even supposing that our brains are of the same quality, and our working hours equally effective. A very simple use of mathematics will show you that I am older in hours than you are, and that hence I should have a fuller mental equipment, a wider store of knowledge, a more mature view of life. Q. E. D., as we used to say in the geometry class.

"Of course," he concluded smilingly, "you may really be a whole lot wiser than I, for your brain may be so much better than mine that you can learn more in ten minutes than I do in an hour; but please don't assert your wisdom again on the score of mere age; for there, as you see, I have you at a disadvantage."

I recall that I was a good deal struck with this presentation of the age question at the time. Being young myself I naturally sided in sympathy with the counter of hours, though I should not now regard his logic as unassailable. I should by no means admit, for example, that hours spent in familiar discourse at table, or hours devoted to competitive games are to be scored over unqualifiedly on the wrong side of the ledger of life-experience. Yet on the whole the argument for counting the life term by its well-used hours contains so large a germ of truth that I have thought it worth transcribing here.

After all, however, this presentation only serves to give graphic illustration to the familiar truth that mere age is not the final test of any man's wisdom or mental state. All about us in everyday life we see men who have attained full maturity of hours, yet who have not achieved, and who never will achieve wisdom. All too many are the men who grow in self-complacent ignorance rather than in knowledge with the increasing hours.

Yet, on the other hand, it is hardly to be denied that the average man passes through somewhat clearly-marked strata of life with the increasing decades,—after adolescence, I mean of course, and before the onset of senility. Nor, indeed, are such phases confined to the life-history of ordinary men. Men of genius exhibit growth and change none the less markedly, as witness the "periods" of such painters as Raphael and Velasquez, or of such a writer as Goethe.

We have cited sundry instances of men whose mental powers seemed unimpaired at the close of their eighth decade; there are even instances well authenticated where a fair measure of virility has been retained close to the century mark. But on the other hand, we need not go beyond the common experience of mankind for proof that most men show the weight of years even in their sixth decade. Such an instance as that of Emerson proves that a man of genius of the most penetrating mind may "die at top" while his years are not yet lengthened beyond the normal span.

Obviously, then, the picture presented in our text has a reverse side. But indeed I have more than once suggested that the perennially progressive man is the exception, not the rule. We may go further and admit that even the most progressive mind must compass a pretty definite cycle of evolution and devolution. Absolute stasis is inconceivable, and we must suppose that every human organism is either progressing or retrograding every hour of its life. In the history of every man and woman, there must be one hour, one instant, when the mind is at its very best; one apical moment when it reaches its highest height. Beyond that moment lies the long decline. But in practice, as I have pointed out, no man can say just when that moment comes.

Considering the known interdependence of mind and body, it might at first thought appear that the moment of a man's mental prime might be determined by tests applied to this physical organism. But further consideration shows the fallacy of such a supposition. The big brain upon which man's intellectual status depends is the very latest product of evolution; whereas the muscular system in its full development belongs to the childhood of the race. It is then but the normal expression of the laws of heredity that each individual should reach his physical prime long before he reaches the climax of his mental powers. The champion athlete is at his best in the twenties, or at latest in the early part of his fourth decade. By thirty-five, as a rule, he has passed his climax of muscular efficiency. His muscular system may at best seem almost to "hold its own" for another decade.

But meantime the organism is entering on what might be termed the cerebral epoch: the muscles have had their day, it is now the brain's turn. That too must pass on to a climactic in due course; but it was the chief thesis of our text to suggest that, for the average man and woman, the period of up-grade might be prolonged, and the declining slope made less precipitous.

IV

THE LESSON OF HEREDITY

[Amplifying the text of the chapters on Life-Companionship, and The Coming Generation, pp. 210–240.]

The scientific shibboleth of our time is heredity. The word is on everyone's tongue. Viewing a fallen fellow-mortal, it is quite the fashion to shake one's head and say, "Oh, heredity accounts for him; blood will tell." And with this formula we are accustomed to measure our fellows, much as a clerk measures cloth. And lest there should be any doubts about the method, the man of science comes to our aid.

"Yes," he says, "you are quite right. Your formula expresses the universal principle of heredity. We word it a little differently, but the idea is the same. 'Like begets like' is the way we put it. It applies to every living thing in the world. Notice this bacillus, for example. Even as you observe it beneath the microscope, it divides, and two bacilli are there in place of one. This process it will continue indefinitely, under proper conditions, until there are myriads of bacilli there, but every one will be precisely like the first. The cholera bacillus never changes into the bacillus of consumption, nor that into the bacillus of diphtheria. Each produces its own kind and no other. 'Like begets like!' It is beautifully simple, unequivocally true, and of universal application."

It is little wonder that so relatively simple, so true and so sweeping a proposition has proved alluring. All universal formulæ are so. But it should not be forgotten that a seemingly simple principle may become very complex indeed, in its application. So it is here. Indeed, a stumbling-block of most alarming dimensions appears at the very outset if we attempt to apply the principle of heredity intelligently to any higher organism, in the fact that two parents are to be considered. These parents are not precisely like one another, hence, in the nature of the case, the offspring must be either identical with one parent and unlike the other, or else identical with neither. Here theory wavers, but experience proves that the offspring always combines in some measure the qualities of both parents; hence, that it never is precisely like either of them. What, then, becomes of the principle of heredity? It appears that like does *not* beget like in the sense of identity; and if "like" is only meant to convey a sense of general similarity, it is altogether too vague a principle to have practical utility.

In point of fact, however, no such vagueness exists. The seeming obscurity results partly from the complexity of the conditions and partly from misapprehension of terms. The explanation is found in the fact that heredity implies not so much the transmission of conditions as of tendencies.

Speaking loosely, we often say that consumption, insanity, and heart disease are hereditary. Strictly speaking, the statement is never true. An inherent weakness or susceptibility of lungs, brain, or heart—a tendency towards disease of these organs—may be transmitted, but not the diseases themselves. And so of other conditions. The word tendencies is our open sesame. Two parents having qualities unlike and often mutually exclusive cannot transmit these qualities to their common offspring; but they can transmit all their tendencies to that offspring, even though these tendencies be antagonistic.

An organism cannot *be* two things at once, but it may *tend* to be many different things; antagonistic tendencies within it constantly struggling for the mastery. And aided by external conditions, the tendencies at one time subordinate may at another time become dominant. Failing of such favorable conditions, tendencies may keep up an unequal and seemingly inefficient struggle throughout the lifetime of an individual, without once making themselves manifest, and yet be transmitted to the offspring with such potential force as there to become operative.

To illustrate: If one parent has black eyes, the other blue, it is evident that both cannot transmit the color of the eyes to their child. But one may transmit a tendency to black eyes, the other a tendency to blue, and according as one tendency or the other proves the stronger, the child will have black or blue eyes. Suppose the black-eye tendency prevails for the moment—that is, for that individual. The blue-eye tendency is not eliminated; though dormant for that generation, it may reassert itself so strongly that a child of the next generation will have blue eyes though both its parents have black eyes.

Nor is this all. A tendency may remain dormant, and perhaps unsuspected, not merely for one but sometimes for many generations, becoming at last manifest again in a remote descendant. And this is as true of mental and moral tendencies as of physical. In short, the observed facts would seem to warrant the conclusion that the organism never relinquishes any tendency it has once acquired, but holds it in stock, if need be, generation after generation, awaiting a favorable opportunity to herald it forth. Only by such a supposition can we explain the commonly-observed fact of inheritance from remote ancestors, or, as Darwin termed it, atavism.

Manifestly, then, we shall greatly err if we attempt sweeping estimates of a child's hereditary tendencies from a study of its parents alone. Nor will it suffice to turn to grandparents, or even great-grandparents. Atavism assuredly reaches far back of these. But if we invoke a remoter ancestry, we shall be dumfounded at the response. Behold them! There were eight great-grandparents; thirty-two individuals in the generation before that; then 64, 128, 256. We have reached back only to the time of the Pilgrim fathers.

And still they accumulate, these unavoidable ancestors. In the tenth generation they number a thousand, omitting an unimportant dozen or two for the sake of round numbers; in the twentieth generation they are an army of a million. And this is going back only to the twelfth or thirteenth century. One need go but little further and the seemingly unassailable mathematicals will name him an ancestry co-extensive with the entire population of the globe.

Thus are we all proven brothers in fact as well as name. Thus is the antiquarian justified who had traced his ancestry down to the beginning of the seventeenth century, but there lost it; in truth he can scarcely have gone amiss up to that time. Seventeenth, eighteenth and nineteenth century genealogies are for parvenus.

But behind the jest lie sober realities of the most far-reaching import. Admitting that when examined critically our computation is somewhat shorn of its astounding proportions by marriages of consanguinity, the fact remains, beyond all levity, that every human being, high or low, has had within recent times a multitude of ancestors in direct line of descent. Marriages of consanguinity being, perhaps, most frequent in circles of royalty, probably the persons who have the fewest ancestors, and of whom, therefore, as we shall see presently, we should expect the least, are kings and their kith.

And yet the aristocrat is wont to look down upon the plebeian because he has no ancestors! He means, of course, that the plebeian does not know the name of his ancestors. But what does he know of his own? Sir John Jones boasts loudly of his lineage because he knows the names of his little line of Jones ancestors for, say, ten generations back. He holds in contempt poor Smith who cannot bring documentary evidence that he had a great-great-grandfather.

But has Jones at his tongue's end the records of all of the other fifteen of his own ancestors of that fourth generation whose names were *not* Jones? I venture not. But even if he had, what does he know of that boasted tenth generation? Why, that *one* member was named Jones. But what of the 1,023 other individuals who make up the remainder of the phalanx? The ancient Jones may have been a very great man indeed, but he represents less than one-tenth of one per cent. of the present Sir John's ancestors of that single tenth generation.

Fortunate is it for Sir John's peace of mind that he does not know the others, for it is many chances to one they were a motley crew, scattered in all parts of the globe. Not improbably, there were a few Turks and Arabs, and a Negro or two in the company, and it is not at all unlikely that a few score of them were vassals or slaves to some of poor Smith's illustrious but now forgotten ancestors of that same generation.

But whether kings or vassals matters not for our purpose. It is only important to recall that these multitudinous ancestors existed. And there they surely are, ready to be summoned at a moment's notice by the simplest computation. Making fullest concessions to consanguineous marriages—say by reducing the number one-half—there still remain more than one thousand shades to answer the roll-call of each and every individual's ancestors within ten generations past. And the principle of atavism is at hand to prove that any particular tendency of any one of these ancestors may crop out unexpectedly after being long suppressed; nay, more, that all the multitudinous tendencies of all these ancestors must be represented—though combined and modified—in the personality of each Smith and Jones, and X, Y or Z of to-day.

An awful thought, is it not? What wonder that we poor conglomerate mortals are torn by doubts and uncertainties, and contradictory aspirations and conflicting passions? What wonder that consistency is rarest of jewels? The wonder is rather that we can manage to spin any continuous or rational thread of life at all out of such a tangle of unmiscible tendencies. "Like begets like" has ceased to be the simple principle that it seemed.

It appears, then, to use a graphic illustration, that every individual represents the apex of an inverted pyramid of descent, whose base, extending back into history, at some point coincides with the base or a sectional plane of the ancestral pyramid of every other individual of his race. Why, then, since the same principle has applied to all, are not the apices all identical? How has the principle "like begets like," applied to a common ancestry, produced such a diversity of descendants? Heredity, unaided, can give but one answer to this question. It is because the elements of this conglomerate ancestry have not been mixed equally. In other words, because of marriages in different degrees of consanguinity.

The answer is not sufficient, yet it can account for much. Let us examine it before seeking for other causes.

In the nature of the case, if men are all descended from a common stock, all marriages must be in some degree of consanguinity. But the degree may vary from the incestuous union of brother and sister, which was legalized among the ancients, or the marriage of cousins, which is the limit fixed by most modern civilizations, to the usual cases in which all trace of relationship has long since been lost.

At first sight, it is perhaps not apparent why marriages in close degrees of consanguinity should be of especial significance in their bearing on the problems of heredity. But a moment's reflection will make this plain. In the first place, a consanguineous union greatly restricts the variety of tendencies of the descendants. A person whose parents are cousins, for example, has only six great grandparents, instead of the normal number of eight; and thus, to carry the computation no farther than that generation, his aggregate tendencies are restricted in diversity by one-fourth—in itself a serious matter. And, in the second place, certain of these restricted tendencies may be accentuated in a way that may be yet more serious. These are the tendencies of two great-grandparents in whom both lines of descent meet, and who therefore count as four persons in reckoning the child's inherited possibilities.

The offspring of cousins may therefore be theoretically expected to have (1) less than the average diversity of tendencies, and (2) an abnormal instability of tendencies, due to the accentuation of certain groups. And here practical observation fully sustains theory. It is by the application of these principles that all the specialized races of domestic animals have been so rapidly developed.

This, then, I say, is the only answer which heredity alone can give as to why individuals vary in their tendencies and qualities. The answer does not seem sufficient, for to be tangible it is evident that the unions must be in close consanguinity, and it is well known that such unions are everywhere exceptional. Even barbarians go to outside families, and even to outside tribes for wives. But aside from this objection the argument contains a fallacy in that an element not accounted for by heredity alone has been introduced unwittingly. And in some respects the interpolation is of more importance than the original document.

Let us look more critically. We have just assumed that every individual inherits all the tendencies of all his ancestors. If, then, all the tendencies of the race were represented in that remote common ancestry to which we are referring, and all these tendencies again were epitomized in each and every descendant, it is not apparent why it should make much difference whether a being has six great-grandparents or eight, since the two ancestors who would be doubly represented in the curtailed generation would doubly represent exactly the same focalized group of tendencies as would be represented by any other two persons. And yet we know that consanguineous unions do make a difference in practice.

We have come to another stumbling block. But the explanation is not far to seek, though it lies partly outside the domain of heredity. We have said that every individual comes into the world with possibilities representing the sum of all the tendencies of all its ancestors. This formula is certainly at once correct and comprehensive. It would be a misuse of language to speak of inheritance of a tendency not represented in some ancestor, near or remote. But the same formula does not represent fully the personality of the same individual when he has grown to adult life, for then we must say, The sum of all the tendencies of all ancestors *plus* certain qualities developed in the present generation through contact with a definite environment. And these acquired qualities we are bound to believe, notwithstanding the dissent of a certain school of modern biologists, are represented in the sum of tendencies which this individual transmits to his progeny. It is as if an ancestral estate received additions with each generation of holders. Only it must be remembered that the additions are not necessarily improvements. There are minus as well as plus quantities in our problem of heredity.

Not only may new tendencies be thus added generation after generation, but the old tendencies may be given new significance, certain ones being developed under a fostering environment till they preponderate as they had never done in a previous generation; other tendencies being, of course, proportionately pushed into the background.

Manifestly, then, this new factor of environment is a force to be reckoned with. It is the variable quantity which is introduced into the personal equation of every creature, to be considered along with the fixed quantity, hereditary tendencies. And as this variable can never be exactly the same for any two organisms in the world, it follows that no two personalities can ever be identical. Thus it appears that the diversity of individuals and of races, which is the observed condition of organic nature, has come to pass primarily through environment, not through heredity.

Now it is manifest why it does make a difference whether one has six or eight ancestors of the third generation, for the two additional ancestors would have brought certain tendencies that had been developed by the specific environment of their particular lines of recent ancestors, which must necessarily have varied somewhat from the tendencies of each of the other ancestors of that or any other generation. The remote or fundamental tendencies, inherited from the common ancestry far removed, would have been the same in all; the points of difference pertain to certain less fundamental, but scarcely less important, lines of special development.

And these additional tendencies, as we have seen, are not to be set down to the credit of heredity, but to that of environment. And, indeed, if we were to carry the analysis back along exactly the same lines to include the remote ancestors and their fundamental tendencies, we should find that exactly the same arguments apply there with equal force. Time was, in the far past, when these qualities, which we now term fundamental because they are of long standing, were in their turn developing; and we are bound to believe that they also were developed primarily through the influence of environmental forces, acting on a responsive organism. In fact, all that we can know of life and mind is the reaction of a certain kind of matter to the impinging forces of its environment.

In this view, the most that can be said for heredity is that it has held a kind of receptacle into which tendencies as they were developed were thrown for safe keeping. It has developed nothing, originated nothing; but it has been a most faithful Lord High Keeper of the Treasury, for it has let no single precious tendency escape when once it had been acquired.

The function of heredity, then, is the retention and transmission of tendencies. This function it performs with the most absolute impartiality. It sees to it that each quality of an individual—whether dominant or subordinate, patent or latent—is represented in the progeny of that individual. It can do no more; its mission is completed for that generation; it must leave the plastic material for the great moulder, environment.

And the forces of environment come to the attack right vigorously. But they also have their limitations. Certain general characteristics of body and mind have been so ingrained in the race through persistent repetition that they can by no possibility be greatly altered in a single generation. All the tendencies of all the ancestors near and remote coincide in the direction of these qualities. The transforming power of environment must turn chiefly to those newer tendencies which have been developed in recent generations, and to a decision between antagonistic tendencies.

And yet even the primordial tendencies are not altogether beyond the pale of environment, because none of them is absolutely fixed by heredity. Take the matter of stature, for example. The ancestral tendencies vary within a limit of many inches. Some ancestors have been perhaps but four feet tall; others have been nearer seven feet. But there is a strong average tendency perhaps towards a stature of between five and one-half and six feet. Within these limits, environment may under ordinary circumstances decide. Nutritional conditions during infancy, childhood, and adolescence—the presence or absence of disease at critical periods, and the like—will determine the exact stature in the individual case, just as general nutritional conditions have determined the average stature of different races of men—the Esquimaux, for example, or the Patagonians.

And what is true of the physical stature is equally true, *mutatis mutandis*, of the mental and moral stature. But the fact that the stature, physical, mental and moral, is fixed at a certain limit for one individual, does not irrevocably fix the limit for the offspring of that individual. Each individual case changes the average of tendencies, of course, but it does not eliminate the old tendencies; and these old tendencies, reacting to a changed environment, may produce a very different individual result in a succeeding generation.

The average results, in deviation from the old average, only assume permanence when the race is subjected generation after generation to the conditions that first wrought an individual change. The Esquimaux, for example, have come to be a race of relative dwarfs because their environment has for generations been defective from a nutritional standpoint. But no doubt atavism still holds for them the tendency of remote ancestors to larger stature, and under changed meteorological conditions they would doubtless return gradually to the old-time average.

But even under conditions as they exist, environment has not changed the physical, mental or moral qualities of this race in *kind*, but only in degree. The broad synoptical outline of qualities inherited from the remote common ancestry are still the same as those of every other race of human beings in the world. It is the specific, the newer, and hence, on the whole, the less essential qualities that differ.

If this is true of different races of men, it must be far more tangibly true of the extremes of the same race, who live under conditions much less widely variable than those that separate the races. Caucasian and Esquimau must perhaps go back millennia to find a common ancestor; but the lord of the manor and his lowliest servant have probably had common ancestors within a few centuries past. Not merely their fundamental tendencies then, but many of the more specialized tendencies are inherently the same in both. The familiar traditional tales, doubtless some of them founded on fact, of infants of beggars and princes being transposed in the cradle without subsequent discovery, illustrate this fact perhaps as forcibly as a more sober argument could do.

If further proof were needed, one has but to turn to the records of common every-day experience, and analyze the characteristics of such representatives of the extremes of contemporary society as are personally known to him. He will find the same general physical qualities, the same general mental qualities, above all the same general moral qualities at each end of the social scale.

Why?

Because these general qualities have had the stamp of approval of myriads of common ancestors. The details of specialization differ widely, of course; as widely in mental and moral directions, as, for example, the unkempt beard and ragged clothes of the one differ from the waxed moustache and fashionable suit of the other. Such differences have been wrought by different recent environing conditions, but far more significant likenesses have been retained. The lovers of Mary Ann settle their rival claims by resort to fisticuffs; the lovers of Priscilla by innuendo, or repartee, but the principle is the same. The hero of the Bowery stage overcomes the villain perhaps by blows, at least by physical prowess; the Broadway hero triumphs through more subtle and intellectual processes.

But the essential thing is that in each case the hero must triumph. He may swagger with hands in pockets, or perhaps boast and swear in choicest Bowery dialect; his pathos may be, for more refined ears, suspiciously like bathos; his courage may be bravado; but always, in the intellectual eye of his audience, he must be an approach to an ideal hero, good, noble, aspiring, or he cannot receive the plaudits of even the worst audience.

Why?

Because we look to stage and story for ideals, and the same ideal aspirations have been inherited from remote common ancestors by both extremes of our social life.

The fact, then, is everywhere patent that heredity accounts for the sameness of our race, not for the differences. The latter are the work of environment. It is further true that it is the plan of Nature—to use, for convenience' sake, the old language of teleology—to avoid extremes and keep as near as may be to the happy mean through the aid of heredity. It is as if she looked with equal affection upon every tendency once implanted in a race of her creatures, and strove always to aid the tendencies that were for the moment subordinated. To accomplish this end she adopts a very simple but very effectual expedient. We express this expedient commonly in the saying that opposites attract. This means, in the light of what we have just seen, that a person is drawn towards a person of the opposite sex whose predominating tendencies correspond to his subordinated ones. By this means tendencies subordinated in one generation are reinforced and become dominant in the next; by this means, in other words, atavism is accomplished.

Note, as practical illustrations, how the tall man is attracted by small women, blonde by brunette, genius by mediocrity. It is even matter of common experience that the most virtuous young women are often fascinated by the opposite moral traits in their male associates, while, contrariwise, the most vicious of men would always choose virtuous helpmates if they could. Thus, within the ranks of any caste of society, there is a constant effort to equalize the average tendencies and bring back that hereditary balance which environment is forever tending to disturb.

A like effort in a wider way is manifest in balancing the castes themselves. For every specialized development far in one direction, brought about through a pampering environment aided by consanguineous marriages or marriages of expediency, carries its own Nemesis, in the fact that growing instability always goes hand in hand with extreme development. We noted how specialized races of domestic animals have been rapidly developed by special environment and artificial selection (corresponding to marriages of expediency), and now we have further to note that the specialized race so developed is always an unstable race as compared with the mother stock from which it has sprung. Only by a perpetually pampering environment and a selective in-breeding of an unnatural kind can it be kept from reverting through atavism to the original type; and if it is allowed to return to natural environmental conditions, it immediately does begin to return to the old-time average status—as witness the wild horse.

All this, of course, is explained easily through the struggle for existence and its resulting natural selection. Now exactly the same thing occurs among human families under similar conditions. The best illustration is afforded by the uniform history of royal dynasties. Founded usually by some person who combined rare and desirable hereditary tendencies, they are perpetuated by tradition, under an enervating environment, to whose undermining influences are added the like influences of marriages of expediency and often of consanguinity, until in a few generations the inevitable result is reached of ill-balanced offspring, often brilliant in certain useless directions, as often insane, who are unfitted to rule, and who are presently supplanted, despite tradition, by some strong offshoot of the family, or some entire outsider, whose descendants will in turn reenact the same cycle of degeneration.

In a lesser degree, this same cycle is to be witnessed in the family histories of those upper strata of society that are always prone to model after royalty. The degeneration and frequent extinction of our "oldest and best families," with the concomitant rise of new families, is an illustration within the experience of everyone. But everywhere it is the same story: through environment, primarily, are the changes wrought: through heredity—especially as exemplified in atavism—is the stability of the race maintained. These two forces are respectively the Radicals and the Conservatives of Nature. The one insures progress, the other prevents evolution from taking such strides as would lead the race to disaster.

In one sense, perhaps, we are all "born criminals," for we inherit from remote ancestors traits that if they had free play would ill accord with the customs of our modern civilization. The child who, in a moment of impotent anger, claws viciously at the face of its mother manifests an emotion no different from that with which the remote feudal ancestor fell upon his enemy and gave him battle. The proverbial cruelty of children to animals is perhaps reminiscent of those days when the ancestors of the race lived by the chase. But these are single phases of a most complex personality. The same infant that at one moment is so vicious will the next moment hold up for the kiss of the mother cheeks wet with penitent tears. The boy who feels an instinctive desire to hurl stones at a strange dog, will just as instinctively bestow upon the same dog acts inspired by regret and pity if his missile unfortunately find its mark.

The two sets of emotions are antagonistic, but they are alike "instinctive."

We need but watch for an hour the conduct of a child yet so young that his deeds express instead of masking his emotions, to gain tangible evidence of those complex hosts of antagonistic tendencies that are battling within the budding mind. And when we realize at its full value the fact that no one of these tendencies can, by any possibility, be altogether blotted out from the personality of that being while it lives, we shall realize, also, that such flippant phrases as "altogether good," "wholly bad" and the like have no real meaning as applied to the complex mind of man.

It may be conceded, of course, that if we were to classify all human tendencies by an ethical standard into two groups, every mortal must, at a given moment, strike a balance for good or evil, though most of us, I fear, would be very close to the line at best. But in the light of heredity—of atavism—it can never be conceded that any mortal has been or can be born into the world who has not inherent tendencies that are good as well as those that are bad. From which follow the warning corollary that no mortal can be above the possibility of temptation, and the cheering one that none can be beyond the pale of hope.

And this is, to me, the great lesson of heredity.

He has but poorly read the lesson who will attempt definitely to forecast the future of any human being. Only a false prophet could, in the name of heredity, deny all hope to the child even of the most depraved criminals. As it lies there in its cradle even amidst the squalor of poverty and vice, no one can deny that it is a sweet and innocent morsel of humanity; and if contemplation of its parents causes us to shudder for its future, we may obtain a vision equally valid and far more cheering by letting our mental retrospect extend to include the worthier members of a conglomerate ancestry.

Of a certainty there are good tendencies as well as bad welling up into that nascent mind. Not improbably there are many evil currents sweeping in one direction nearest the surface, but rest assured there are deeper counter currents.

Whether these deeper currents will ever reach the surface is a question that lies without the pale of heredity. That delightfully impartial verdict "Blood will tell" conveyed all the message that heredity could bring. But *which* blood—the good or the bad?

Heredity cannot answer. The decision rests with environment.

Hence the fundamental mission of all social reforms that go to the heart of things must be so to mould the average environment of civilization that in a larger and yet larger percentage of cases the good blood rather than the bad in each newest generation shall be *made* to "*tell.*"

V

GHOSTS FROM DREAMLAND

[An amplification of the idea summarized in the opening paragraph of p. 270.]

Most of us are accustomed to think of the time of sleeping as a time of mental passivity—a time when consciousness is altogether absent, or when at most the ill-coordinated ideas flit hither and yon at their own sweet will. But it is well to recall that there are students of the mind who would immediately assure us that in this regard the sleep-state differs from the waking state in degree only, not in kind. Such critics would contend that all mental action, conscious or unconscious, is automatic, predetermined by heredity and environment (experience); and that the mind is the victim of self-illusion in thinking itself the arbiter of a train of thought, of which it is in reality only a spectator.

It would lead us far afield to discuss this contention here, but everyone may find for himself at least a suggestive answer through a moment's consideration of his own dreams.

How realistic, how life-like, after all, even the most "bizarre" dream is. How familiar is the sequence of ideas, how like to a train of thought of our waking hours. If here and there arises an unfamiliar form, it is after all some creation of the imagination modelled along familiar lines. If we seem to do things that we have never done or could never do in real waking life, they at least are things that we can imagine while awake. Indeed, as a rule, the dreams that we clearly remember after awaking present a record of very clearcut and logical lines of action, even though involving, for example, certain physical feats—such as rising through the air and the like—that are not physically possible.

The most grotesque dream is no more grotesque than sundry trains of thought that flit through our brains in times of waking reverie.

The one radical distinction is that we know the reverie to be of a flight of fancy, whereas the dream, while it is passing, seems to impress itself upon us as an actuality. If in a normal waking reverie the mind's eye pictures an absent friend or a dear one who has long been dead as standing before us, we are but conjuring with a phantasy of memory—there is no real illusion. But when the same form stands before our dreaming mentality, its reality is unchallenged; we believe ourselves to be in the actual presence of the remembered persons; while we are dreaming we no more doubt the substantiality of the apparition than we doubt the direct evidence of our waking senses, when an actual person stands before us.

I have already offered a brief explanation of this phenomenon, in the suggestion that the illusion is due to the fact that the dream lacks the background of varied impressions, memories, and conditioned ideas that always give a more or less true sense of personality to the thoughts of the day-dreamer. But we are not now concerned with the cause of this phenomenon; we are concerned with the fact itself, which accords with the commonest experience.

I suppose there is no reader of these pages who has not dreamed of standing in the presence of some friend who has long since departed this life. At all events, such dreams are not uncommon with most of us. Many students of the evolution of human ideas contend —as it seems to me with no little reason—that such dreams as this are responsible for some of the most fixed delusional ideas that hold our race in subjection. They believe that the savage, away back in those dim prehistoric days, was wont to dream of meeting his dead foes and friends, and that the undisciplined child of nature accepted the apparition of the dream state as a real manifestation. While he slept—so he verily believed—his spirit had been set free from its fleshly habiliments, and had wandered forth on expeditions, friendly or warlike, and in the strange supersensual realm thus opened up had met beings known to him of old, but now no longer visible to his waking eyes.

Such, according to this analysis, was the origin of that belief in ghosts, which with all its multitudinous expansions and elaborations has played so important a part in the history of human development.

But, it may be asked, was primitive man really a dreamer? Did he not rather sink into profound and unbroken sleep as soon as his physical needs were satisfied, oblivious to the world?

For answer it may be noted that the dream-state is familiar ground to every race of man; to all ages from childhood to senescence. Nay, more, it is not the exclusive territory of human sleepers. Watch old Carlo lying there by the grate stretched out in profound sleep. See now and again how his muscles twitch as if in futile effort to swing forward in a gallop, while his jaws half open and a suppressed bark comes from his throat.

Can you doubt that the dog is dreaming? that before his mind's eye there appears the image of some rabbit that he chased aforetime, of some strange cat, some friend or foe of his own species?

Even before our primitive ancestor had attained human development, then, he was doubtless a dreamer; and we cannot well doubt that his earliest self-conscious picture of the world in which he found himself included the conception of a second self—an immaterial personality—associated with all living things, human and non-human alike. His world from the very first was a world peopled with ghosts.

If this be true, then we shall not greatly err if we suppose that the sub-conscious condition of the dream-state has been responsible for almost as important a share in the mental development of our race as has been evoked through the activities of the period of waking.

For who shall measure at its full worth the power of superstition, which has hung as a blighting pall over the mind of man, distorting his vision, causing him to see unreal forms, to conjure up apparitions, to flee when no man pursueth, to shrink in terror from his own imaginings?

To-day you and I know that the varied forms we see in the land of nod are but tissue of dreams; we *know*, but do we quite believe? Is there not still upon us the spell of our ancestry, lurking as just the semblance of a doubt away back there in the recesses of our mind?

The loved one long since dead, who spoke with us while we slept—standing before us in the old semblance, speaking with the old voice—are we quite sure that he does not really exist in a super-sensual world? The dear friend by whose sick-bed we stood in imagination last night—are we quite sure that he may not be in reality ill? "Nonsense, dreams go by contraries," we say; but the very phrase implies a deep-seated half-belief that the dream has some occult significance. At least we should be happier this morning if we had not had that hideous dream.

Nor is it our own self-consciousness merely that has been made to suffer by the visions from dreamland; man's relations with his fellow man have been all along compromised by the beliefs in question. Go back into history and you will learn that the old Babylonians and Assyrians and Egyptians lived in ghost-haunted worlds. Necromancy, conjuration were rampant, and the non-existent effigies conjured from dreamland held as important a part in the life of the people, as did the actual personages of waking life.

When an Egyptian died, his friends must on no account fail to have his physical body preserved by elaborate processes of embalming, that it might await the ghostly spirit which in due course would return to re-inhabit it.

If an Egyptian fell ill, he believed that some enemy had practised a magical curse upon him. He believed that even inanimate things have ghostly attendants; and that by fashioning a likeness of his enemy in wax, any indignities practised upon this waxen double would result in like injuries to the enemy himself.

The Egyptian believed equally in a ghostly supersensual part of animals and birds; he worshipped a sacred bull, and practised the art of embalming upon the bodies of ibises and cats with a solemnity that seems amusing to those who have become skeptical regarding the immortality of these creatures,—even though these same skeptics still accept the Egyptian conception as applied to the human spirit.

From the ruins of the cities of Babylonia and Assyria have been exhumed tens of thousands of tablets graven with inscriptions. A host of these are omens and incantations against evil spirits which,' according to the belief of the time, lurked back of all the appearances of nature.

Greek literature teems with illustrations of the same spirit. The noted pictures of Charon rowing the shades of the departed to the shores of the nether world are as familiar as the images of household companions. Invisible gods dwelled on Mt. Olympus, and perpetually interfered with the affairs of men. Iphigenia, about to be sacrificed, is spirited away, and a stag miraculously substituted in her place. Bacchus, imprisoned by a mortal, liberates himself by magic, leaving a bull in his stead. Hippolytus is slain by Neptune in answer to the prayer of his outraged father, who is led to regret his mistake through revelations made by Diana regarding the machinations of Venus. It is impossible to go astray in seeking for similar illustrations, anywhere outside the purely historical literature, and even there similar incidents may be found though the great historians—Herodotus, Thucydides, and Xenophon—show something of the skepticism that is the birthright of advanced thinkers in all ages.

"But," you say, "surely the people did not really believe in all these apparitions, even though they made use of them in their literature."

You are quite wrong there. The people did believe in their ghosts. It might almost be said that the subject did not admit of disbelief; it was so much a matter of course, that to doubt would be like doubting the existence of the material world. Some philosophers there were, to be sure, who professed skepticism regarding this material world; and akin to their attitude was that of those other philosophers who in one measure or another doubted the ghosts. For people in general, the question was probably never so much as raised.

And for that matter, we may come very much nearer home for equal credulity, with evidence so demonstrative that none can question it. It is found in the records of mediæval times—records that tell of the executions for witchcraft. No one who reads these records can doubt that the magistrates and prosecutors of that time—in common with the greater number of their educated comtemporaries—fully believed in the existence of the occult practices which they charged against their unfortunate victims.

The last execution for witchcraft took place about two hundred years ago. But long after people had ceased to believe in the active influence of witches, they continued to believe in so-called demoniacal possession. To the eighteenth century humanitarian, even, the insane man was one possessed of an evil spirit.

Such then is the train of ghosts that has marched down the ages in the wake of the phantom dream-host of our primeval ancestor. Said I not truly when I said that the influence of the sub-conscious sleep-self has been almost as potent as the influence of the waking mind? For all these hosts that so dominated the thought of Egyptian and Babylonian, of Greek and Mediævalist are pure figments of the imagination. This is a world of realities, not a world of ghosts. The phantom host that has preyed on the fancies of so many generations of men is a mere mirage-figment that has but to be approached to vanish into nothingness. Yet it held sway for hundreds of centuries.

And dare we say that even to this day it has vanished? Dare you and I assert that there is no chance field of our mind over which an old-time ghost stands guard? Are we quite absolutely emancipated from the thraldom of superstition?

Are you, for example, quite certain that you could wander among the musty tombs of a cemetery at night with precisely the equanimity that would attend a daylight visit to the place? Of course you do not believe in ghosts; yet perhaps you prefer not to have your skepticism put to just this test.

Or again, your ghost-attendants may be of another quality. Perchance you are of those who pay revenue to one or another of the fakirs who profess to bring information as to past and future from a super-sensual world. You go half-jokingly; you disclaim any real belief in these occult powers—yet you go, and pay your money as well.

Perhaps ten thousand years of scientific progress have placed the heritage of their achievement at your beck and call; and in all that record there is not one jot of evidence for the existence of a super-sensual ghost-world such as that you pay to visit. But you prefer to ignore this fact. You prefer to class yourself with the Babylonians of say the year 3000 B. C. You prefer that your waking mind should strive to rival the sub-conscious mind of sleep, and live in a world of unsubstantial dreams.

Nor is it the direct dream-world alone that has such influence. These elemental superstitions have given us a long line of residual misconceptions that are a constant menace to the sober judgment and the happiness of mankind. Indeed, there is scarcely any limit to the credulity of the mind that allows itself to be inveigled beyond the bounds of the natural. And the effects of such credulity are vastly important in their influence on the happiness of the individual.

We are accustomed, indeed, to speak of superstition as a thing of the past, but in point of fact it would be hard to find an individual who has altogether banished it from his daily life. One man believes in lucky or unlucky days, and is directly influenced in his everyday actions by this belief. Another is downcast if he has seen the new moon over his left shoulder. A third will not pass a pin on the street without stooping to pick it up, or is greatly annoyed if a wayfarer chances to pass between himself and a companion with whom he is walking. And so on throughout the absurd and wearisome list.

Certain classes of people—notably gamblers, speculators, and actors—seem peculiarly under the spell of superstitious ideas, but it is hard to find a person in any calling who down in his heart does not cherish at least one eccentric little idea which, if analysed, must be confessed to be a pure superstition. Even if he openly tries to root that idea out of his mind, very likely it will still cling. A member of the Thirteen Club, who prefers to begin a journey on Friday, may shudder in spite of himself if he chances to break a mirror.

Such little inconsistencies are deep-seated. They will not vanish at the bidding.

Surely such grotesque notions do not make for happiness. Rather do they serve, reminiscent as they are of yet more befogged eras, like the conscience-cutting memory of a would-be forgotten sin, to add to the gloomier uncertainties of life. On occasion their influence may be even clearly and demonstrably evil. For example, a few years ago a report found currency in the newspapers to the effect that a distinguished United States Senator had said, a few months before he died, that he was not superstitious, but that he believed his life was in some mysterious way bound up with that of a certain pine-tree in his door-yard.

This statement manifestly is as consistent with itself as if one were to say, "I am not afraid of ghosts, but I fear them greatly."

The report goes on to say that one summer the fatal pine-tree began to wither, and a few weeks before the death of the Senator it died. Accepting the report as published, the event evidently justified the Senator's forebodings, and we need not doubt that there existed in some degree a causal connection between the death of the tree and that of the man. But of course the only possible operation of this cause was through the imagination of the man. Having in some way conceived the absurd fancy that the tree's life was bound up with his own, he must naturally have watched the withering of the tree with apprehension, and the gloomy forebodings thus aroused may very probably have been actively influential in turning the scale against a heart already weakened by disease. In a sense, it was superstition that killed him.

Of course this report, as instanced, may not be true; but whether true or false it serves equally well to point a moral, for if not true as an individual belief, it may fairly stand as representative of the superstitious beliefs of a large percentage of the cultivated people of to-day.

The really significant thing, however, is not that superstitions still cling, but that they have been so nearly banished. The relatively few that remain are mere reminiscences of the times not far gone when superstition was rampant, and the persons who entertain them realize their absurdity even while being dominated by them. It is as hard to find a man who will acknowledge that he is superstitious as to find one who really is not superstitious.

Even when confessing one's little whim, it is customary to disavow its implications in the same breath. If A spills the salt, and is detected throwing a pinch of it over his shoulder, he invariably says, half-apologetically, "I am not superstitious, but I do not like to spill salt without at once throwing some of it over my shoulder." The general disavowal always precedes the specific admission, regardless of the fact that the two are utterly inconsistent.

The act itself was *prima facie* evidence of a deep-seated superstitious belief, which, however, the intellect repudiates. The repudiation is of more significance than the reminiscent act. It marks a distinct phase of intellectual evolution. It shows our progress toward a stage of culture that shall fully recognize in practice, what is already admitted in theory, that law, not chance, rules the world.

It is much, I repeat, that you are half ashamed of your superstitions. You differ to that extent from the old Babylonian. That is well, as far as it goes. But it does not go far enough. You should be not merely half ashamed, but wholly ashamed of these anachronistic ideas. An accident of birth has placed you in the world in an age when, for the first time in human history, all the ghosts have been given quietus—have been explained away, banished back to dreamland whence they came. A thousand pities, then, that you should choose to revert to a dead past, to shrink from the light, to seek out the musty realms of terror-haunted ghost-land.

Far more conducive to your happiness would it be to strive to live in the world of to-day; to endeavor to be really awake while you are not sleeping, and to forget the dreams which the sleep-state thrusts upon you; turning your back inexorably upon that unsubstantial pageant which your primordial ancestors summoned into human society—to the infinite detriment of mankind—out of the land of nod.

Index

"Now one's own mind is a place the most free from crowd and noise in the world, if a man's thoughts are such as to ensure him perfect tranquillity within, and this tranquillity consists in the good ordering of the mind. Your way is, therefore, to make frequent use of this retirement, and refresh your virtue in it. And to this end, be always provided with a few short, uncontested notions, to keep your understanding true, and send you back content with the business to which you return." —*Marcus Aurelius.*

INDEX

"A contented mind," quotation with a comment, p. 138.

"A man that is young in years," etc.; quotation from Francis Bacon as chapter-heading for "Youth versus Age," p. 166.

Ability, the final test of, is success or failure, p. 132.

Absent-mindedness, of the philosopher under the spell of ideas, p. 251.

Acquired habits of application may give mediocrity some of the attributes of inherent genius, p. 161.

Æsthetic Sense, the, its development as an aid to happiness, p. 249 *seq.*

"Affinity" between the sexes, should be a matter of growth and development, increasing with the years, p. 226.

Age, not truly to be gauged by years, hours furnish a truer standard, pp. 169–70; advanced, no barrier to the taking up of new tasks, examples of Schliemann, Elizabeth Cady Stanton, and Queen Victoria, p. 98; who may sanely dread its oncoming, p. 265; the present, skeptical, but rich in achiévements, p. 18; limitations recognized by law and by custom, p. 167.

Ages of man and mental traits that correspond, pp. 167–8.

Air, the curative value of, p. 30.

Alcohol, its influence characterized, p. 33; sane consideration of its use by Mediterranean races, p. 34; a suggestion as to its probable deleterious racial influence, p. 35; illusive belief in its benefit, p. 35; avoided by athletes in training, p. 37.

Alien, the word expresses the attitude of one generation toward another no less than of nation to nation, p. 169.

Alter ego, the, advice as to the interrogation of, p. 117 *seq.*

Altruism, how developed, p. 7; should not be of the maudlin variety, p. 261; developed through parenthood, p. 231 *seq.*

Altruistic aspect of the problem of happiness, p. 260 *seq.*; spirit, its cultivation essential to the development of the highest art, p. 218 *seq.*

Ambition, proper limits to, in individual cases, p. 136; the world's progressive lever, p. 138; misdirected, the cause of much unhappiness, p. 141; lack of it may conduce to individual happiness, pp. 143–4.

"An hour a day," full of educational possibilities, but difficult to secure in practice because of defects of the average will-power, p. 129.

Analysis, habitual self-, a vicious habit, not conducive to happiness, p. 140.

Anaximander, Greek philosopher, a precursor of Darwin, p. 105.

Anthology, Greek, see Greek Anthology.

Appendix, p. 273 *seq.*

Application, the power of, illustrated by examples and anecdotes, p. 154 *seq.*

Aristippus, quoted as to what philosophy had taught him, p. 102.

Aristotle, an anecdote as to his tireless industry, p. 157.

Arm, the human, relative size of, as compared with other organs, p. 48.

Artists, examples of grouping into periods, suggesting the influence of genius upon genius, p. 153.

Association of ideas, the value of new knowledge largely to be gauged by the extent to which it sets up new trains of ideas, p. 111.

Athletes abstain from tea, coffee, alcohol, and tobacco when in training, p. 37.

Athletics, interest in newly aroused, p. 16; general interest in based on a racial need, p. 46–7; in relation to longevity, p. 47.

Athletic sports, the specific kinds most to be commended, p. 53.

Attention, based on interest, the key to the development of the memory, pp. 89–90.

Average man, the, his memory is good enough if developed, p. 88.

Avocation, you should select one and cultivate it; suggestions as to its character, p. 196 *seq.*

Avocations, of a scientific character, p. 198 *seq.*; of an artistic character, the possibilities in this direction are greater than most people are aware, p. 200 *seq.*

Bacon, Francis, "the father of inductive philosophy," his classical maxim as to reading quoted and explicated, p. 111; quoted as to the value of hours, as chapter-heading to "Youth versus Age," p. 166.

"Be brave; be brave; be brave; be not too brave"; the symbolic legend of the Greek temple characterized and interpreted, p. 135.

Beecher, Henry Ward, American preacher and publicist, his intuitive acquisition of knowledge, p. 103.

Beronicius of Middleburgh, said to have known by heart the works of Virgil, Cicero, Juvenal, Homer, and Aristophanes, p. 85.

Bias of mind, through inherited or environmental prejudice; advice as to emancipation from such bias, p. 117 *seq.*

Biographical Dictionary, 1798, quoted as to the saying of William Forbes concerning letters, p. 101.

Blurred vision and slurred habits of memorizing, p. 99.

Bodily health, makes for clear thinking, p. 12.

Body, an indolent, finds reflection in an indolent mind, coordination of this with bad habits of sleeping, p. 79.

Body, the, a machine subject to fairly well known laws, p. 38; close association between its nourishment and the mental status, p. 21; its every organ in a sense a mind organ, p. 44; as a source of trouble, according to Plato and Socrates, p. 58; tends to take line of least resistance, which is seldom the line of progress, p. 131.

Books, a suggestion as to what civilization owes to them, p. 107; the desirability of searching out their treasures for one's self, p. 108 *seq.*; enable us to gain the stimulus of contact with great minds, p. 110.

Bolingbroke, Viscount, his extraordinary memory, pp. 85–6.

Boxing, one of the best gymnasium sports, pp. 53–54.

Boy, a tired boy furnishes an object-lesson in profound and recuperative sleeping, p. 69.

Boyle, John (1707–62), quoted as to the joys of domestic life, chapter-heading for "Life Companionship," p. 211.

Brahman, the average, learns to repeat the 10,000 verses of the Rig-Veda, p. 94.

Brain, the, as a cobwebbed receptacle for the dust of ages,

p. 118; development and health of mind absolutely dependent upon, p. 44; condition of during sleep, p. 67; activity of during waking hours determines largely the need of sleep, p. 73; may often be rested advantageously by a brief mid-day nap, p. 80; needs rest from grinding cares of the business day, p. 195.

Breathing, seldom properly performed, p. 13; importance of proper method of performing; advice as to the forming of good habits of breathing, p. 31; influenced by corsetting, p. 32; the physiology of breathing now taught in our elementary schools, p. 32.

Brilliancy of mind often of no avail unless supported by stability of will, p. 128.

Broadening the mind through the cultivation of new interests and the challenging of prejudices, p. 119.

Budæus (1467–1540), spent some hours in study even on his marriage-day, p. 156.

Bulwer Lytton, quoted as to the altruistic road to happiness, chapter-heading to "The Coming Generation," p. 229.

Bunsen, Baron (1791–1860), German diplomat and historian, found time in the early morning hours to compose his History of Egypt, p. 157.

Burnet, Gilbert (1643–1715), began work at four each morning, p. 156.

Burritt, Elihu, "the learned blacksmith" (1811–1879), American lecturer, quoted to the effect that poets are made and not born, p. 135.

Cæsar, Julius (100–44 B.C.), knew thousands of his soldiers by name, p. 85.

Callimachus (5th C. B.C.), his inscription on the tomb of Saon, p. 272.

Candies, best eaten soon after meals, p. 25.

Carbohydrates, their use in the dietary, p. 25.

Caution, should temper enthusiasm, p. 143.

Chapter-headings, see Quotations used as chapter-headings.

Character, the all-round perfectionment of, p. 248.

Chemical experiments, suggested as an aid to development of habits of logical thought and precise reasoning, p. 115.

Child-mind, the average, is opinionated and resents school tasks through lack of comprehension of their importance, p. 98.

Child, the, the rearing of, p. 232 *seq.;* honesty in dealing with the child should be the first principle of parental action, p. 233 *seq.;* receives ineradicable impulses toward good or evil almost before it leaves the cradle, p. 239.

Cicero cites the lamentation of Theophrastus regarding death, p. 267; "No man is ever so old but that he thinks he may live another year," p. 268.

Cities, population of, replenished from the country, p. 46.

City life, influence of on physical development, p. 46; versus country life; the question of which to choose is one of the first presented; comment thereon, p. 137 *seq.*

City versus country, divergent food habits, p. 28.

Civilization, the artificial conditions as to sleep that it imposes, p. 71.

Clear thinking, prizes for, p. 15.

Climb the heights, physical, æsthetic, and philosophical, pp. 253–4.

Coffee and tea, mild stimulants, but often harmful, pp. 33, 35, 36; non-use of by athletes in training, p. 37.

Colton, quoted as to deliberation and action, p. 147.
Common-sense, the popular name for judgment, its all-importance, p. 113; the safety-valve on over-enthusiasm, p. 142.
Communion with friends, the most certain and lasting source of happiness, p. 205.
Comparison with others, the only safe test of ability, and the best guide to self-knowlledge, p. 136.
Competition furnishes the only sure test of capacity, in physical or mental world, p. 136.
"Confidence and a perfect understanding," the key to marital happiness, p. 227.
Consciousness, the result of destructive chemical changes in the brain, p. 65; the volitional banishment of, suggested as an expedient for warding off insomnia, p. 75.
Contact with great minds, the most important of mental stimulants, it is the province of books to help supply this need, p. 110.
Contemplative minds, prone to build plans to-day and put off action till to-morrow, p. 149.
Conversation, "the best of life," according to Emerson, p. 205.
Country versus city, divergent customs as to food habits, p. 28.
Country-life versus city-life, comment on the pros and cons of, p. 137 *seq.*
Courage, its share in promoting happiness, p. 247 *seq.*
Creative thinking, man's sublimest privilege, p. 119.
Cuvier, Frederic (1773–1838), French comparative anatomist and paleontologist, the first to demonstrate that the earth has had successive populations of vertebrates that are now extinct, referred to as helping to prepare the way for Darwin, p. 105.
Darkness and silence as aids to constructive thinking, the trained mind does not need such pampering influences, pp. 151–2.
Darwin, Charles (1809–1882), English naturalist, whose teaching, as first fully outlined in *The Origin of Species*, doubtless did more to revolutionize the character of modern thought than that of any other man, the acceptance of his views explained, pp. 105–6, p. 112; gave twenty years of investigation to his theory of evolution before announcing it to the public, p. 155.
Day-dreaming, an unfortunate mental habit for every-day practice, admonitions as to breaking the habit and thereby acquiring correct habits of thinking, p. 112 *seq.;* on occasion a highly commendable recreation, p. 252.
Death, a stupendous incident for the individual, whatever his philosophy, p. 257.
"Death and his brother sleep," p. 269.
Defective mental vision, examples of, p. 92.
"Deliberate with caution," etc., quotation from Colton, used as a chapter-heading for chapter "How to Work," p. 147.
De Maupassant, Guy (1850–1893), French writer, famous for his mastery of the short story, believed that such effort as he gave to the cultivation of his art would insure success in any field, p. 155.
Demosthenes (ca. 383–322 B.C.), Greek orator, the familiar anecdotes as to his triumph over difficulties recalled, p. 159.
Descartes, René (1596–1650), French philosopher, a pioneer of modern thinking, his famous dictum "I think, therefore I am" cited as a warning, p. 118.

INDEX

Desire, the universal incentive to action, p. 5; of the individual must be subordinated to needs of the many, p. 17; to succeed is often the determining factor in success; some people fail to get on because they do not really try, p. 137.

Diet, should be varied to meet changed modes of life, p. 23; meat is wholesome, if not in excess, p. 24; the dessert course a menace to the corpulent, p. 25; national differences of taste and custom as to diet, p. 26; pie, the "crowning gastronomic gift" of New England, p. 26; lavish use of delicacies by Americans as contrasted with relative abstemiousness of Latin races, p. 27; American versatility as to changed diet, p. 27.

Dietary, of the nervous child should have especial attention, p. 238.

"Different food is pleasant and nutritious," etc.—Lucretius, p. 20.

Digestive organs, may furnish the stimuli that disturb the brain during sleep and cause dreams, p. 67; proper attention to, as an aid to development of good habits of sleeping, p. 76.

Diodorus, the Sicilian (2nd half of 1st Century B.C.), spent thirty years in collecting material for his history of the world, p. 156.

Dion Halicarnassus quoted to the effect that generous thoughts do not attend misery, p. 190.

Dionysius, Tyrant of Syracuse, composed odes and tragedies that were famous in antiquity in the time which his associates devoted to drinking and play, p. 156.

Discontent, the master-builder of civilization, but not the arbiter of individual happiness, p. 139 *seq.*

Disrepair of average muscular system, p. 41.

"Do nothing for ostentation," etc., quotation from Pliny the younger, p. 164.

"Do nothing unknowingly," etc. —Pythagoras, p. 39.

Dozing in the morning an undesirable habit, tending to produce mental languor, p. 79.

Dreams, why so realistic-seeming, p. 66; the result of incoordinate activity of the brain, coming in response to external stimuli, p. 67; most frequent during early morning hours, when sleep is lightest, p. 68; the habitual dreamer is not sleeping to best advantage, p. 68.

Dream-state, the, p. 66.

Dullard, the, how he may sometimes outstrip his brilliant competitors, p. 129.

Dying, a pleasant experience, according to William Hunter, p. 269.

Dying happily is dependent on having lived happily, p. 258.

Dyspepsia, the goal of food-faddists, p. 21.

"Early to bed and early to rise," an obsolete dictum under modern conditions, p. 71.

Eating, the function of, how abused, p. 13; time for, and racial customs concerning, pp. 27–28; regularity of habit as to meal hours very desirable, p. 28.

Education, its two branches, according to Plato, p. 58; its ultimate aim should be the development of stable wills, p. 129 *seq.;* of the child, some practical suggestions, p. 235 *seq.*

Educational value of physical sports, p. 52.

Effort, assiduous, as the road to great accomplishment, examples cited in corroboration, p. 155 *seq.*

Egotism, competitive sports place healthful check on, p. 53.

Emerson, Ralph Waldo (1803–1882), American essayist, poet and philosopher, his daily garnering of ideas, p. 14; quoted as to the power of thought, p. 122; quoted as to the value of enthusiasm in promoting success, p. 141; quoted as to the manly part, p. 148; quoted as to riches, p. 184; quoted as to consumers and producers, p. 184; quoted as to giving a boy address and accomplishments, chapter-heading to "The Coming Generation," p. 230; "It is easy in the world to live," etc., chapter-heading for "How to Invite Happiness," p. 241.

Energy, from the external world, the source of all physiological action, physical and mental, p. 125.

Enthusiasm, one of the great keys to success, Emerson quoted as to its value, p. 141; should be tempered with caution, p. 143.

Epictetus (ca. 89 A. D.), Greek philosopher, quoted as to the mastery of the appetites without vainglory, chapter-heading for "Physical Needs," p. 19; quoted as to tranquillity of the soul and freedom from ambition, p. 133; "The care to live well," etc., chapter-heading for "How to Die," p. 255.

Epicurus, the Greek philosopher, third century B. C., his famous gardens, p. 10; maxims of, p. 10; consolations of, through philosophy, p. 10; not an "epicure," p. 11; his abstemious manner of life, p. 11; his gardens characterized by a German commentator, pp. 17–18; his own characterization of the goal of his philosophy, p. 18.

Erasmus (1465–1536), his habits of application, pp. 155–6.

Eunus, Greek sculptor, who is said to have inscribed Hope and Nemesis, with symbolic import, on an altar, p. 135.

Evans, Mr. Arthur (contemporary), British archæologist, his opinion as to the possibility that man learned to write before he learned to talk, p. 107.

Events, the memorable of one's life, why they are recalled, p. 89.

"Every man is a consumer," etc. —Emerson, p. 184.

Evils, for the most part have compensations; search for them, p. 246.

Evolution, the idea of is very ancient, Darwin and his precursors, pp. 104–5.

Exercise, will not be taken habitually unless an element of interest is introduced, p. 52.

Experiences, no man is wider than his experiences, but these include second-hand experiences gained through reading; the idea elaborated, p. 106 *seq.*

Explicitness of memorizing, key to memory-development, p. 97.

Face, the, as the index to character, p. 245.

Faculties, a harmonious coalition of, may lead to great accomplishment on the part of seemingly mediocre minds, p. 163.

Faddists, as to food, doomed to dyspepsia, p. 21 *seq.*

Fencing, gives quickness of eye and elasticity of muscle, but makes for one-sided development, p. 54.

Fixed idea, the, should be subjected to practical test, to make sure of its validity, before being followed too persistently, p. 143.

Flint, Dr. Austin, the elder (1812–1886), American physician, his contention that food-faddists are doomed to dyspepsia, p. 21.

Foods, indigestible, a menace to the stomach, p. 13; the question of what to eat settled on common-sense principles, p. 21; individual idiosyncrasies as to, p. 22; experience of humanity in general the best guide as to their wholesomeness, p. 22; nitrogenous, their use and abuse, p. 24; how a distaste for wholesome foods is acquired, and should be overcome, p. 23; carbohydrates often taken in excess, p. 25; fondness for cakes and candies almost a national vice in America, p. 25; rational application of knowledge regarding, p. 23; importance of water and air, p. 29; taking easily digestible food at bedtime to ward off insomnia, p. 76.

Food-faddists, their deranged digestion and mistaken views, p. 22.

Food for one may be poison for another, according to Lucretius, p. 20.

Forbes, Wm. (1739–1806), Scottish author, quoted as to reading and meditation, p. 101.

Fortitude versus courage, similar traits but not identical, p. 249.

Franklin, Benjamin (1706–90), American philosopher, statesman, and scientific discoverer, his estimate of the proper amount of sleep, p. 62.

Friendliness, the, of books, their varied and insistent appeal, p. 109.

Friendship, Epicurus on, p. 10; when developed through avocational pursuits likely to be warmer and more lasting than business friendship, p. 205 *seq.;* its pleasure-giving capacities, p. 205; the true cable of steel between heart and heart, p. 227.

Galton, Francis (contemporary), British sociologist and statistician, cited as teaching that mental influence is almost essentially prerequisite to the full development of scientific genius, p. 154.

Gardens, of Epicurus, characterized by a German commentator, pp. 17–18.

Genius, the mind of, works along the same lines followed by the plodder, p. 104; seldom altogether isolated from genius, examples of grouping of tragedians, painters, etc., p. 153; in part at least, a capacity to take pains, p. 161; not quite so prone to starve in a garret as we sometimes assume; examples to the contrary, p. 190 *seq.*

"Genius of accomplishment," dependent upon stability of will-power, p. 126.

"Give a boy address and accomplishments," etc.—Emerson, p. 230.

Gluttony, kills more than the sword, according to a Latin proverb, p. 26.

Gold versus Ideals; title of chapter XI, p. 183 *seq.*

Gold, the symbol of ideal things no less than of sordid gratification of the senses, p. 189; recollection that it should be a means not an end affords the reconciliation, p. 190.

Golden Rule, two Pagan renderings: (1) by Seneca (ca. 4 B.C.–65 A.D.), p. 146, and (2) by Aristotle (4th century B. C.), is quoted by Diogenes Laertius, p. 210.

Gray, Asa (1810–1888), American botanist, could recall the names of 25,000 plants, p. 93.

Greek Anthology, the, quoted as to memory and oblivion, p. 83; quotation from Lucian in, p. 82.

Greeley, Horace (1811–1872), American editor and publicist; his capacity to work amidst

disturbing surroundings, p. 151–2.
Grotius, Hugo (1583–1645), produced some of his important works in prison, p. 156.
Groups of workers in various fields, suggesting the influence of example, pp. 153–4.
Gunpowder, its invention seemed to take the premium off physical strength, p. 45.
Gymnasium and library, there should be no rivalry between, p. 45.
Gymnasium sports, why handball, wrestling, and boxing are the best, p. 53; a course of beneficial exercises suggested, p. 55; the direct benefit of exercise, p. 55.

Habit, the most powerful of autocrats, p. 37; the foundation of good bodily habits, p. 38; its share in aiding a sleeper to disregard noises that recur regularly, pp. 68–9; its share in developing a good memory, p. 90; its unrelenting character when once fixed, p. 162.
Habits of awakening spontaneously at a given time may be acquired, p. 77; of work, accomplishment becomes easy somewhat in proportion as they are acquired, p. 132; of application, accomplishment through, illustrated, p. 154 *seq.*; to what extent can habits of application be acquired? pp. 162–3; of pleasurable activity should be cultivated, as part of the daily routine, p. 195; of sound sleeping, suggestions for their acquisition, p. 70 *seq.*; once purposeful may be retained after they become motiveless, p. 162.
Half-genius only, awaits its inspiration, according to Hamerton, p. 152.
Hamerton, Philip Gilbert (1834–1894), British writer; his comment on half-genius, p. 152.
Hamilton, Sir Wm. Rowan (1805-1865), British mathematician, a marvel of precocity, but owed much of his success to sedulous application, p. 155.
Hamilton, Sir Wm. (1730–1803), English metaphysician, declared that a too retentive memory interferes with clear thinking, p. 86.
Handball, one of the best gymnasium sports, p. 53.
Happiness, Physical Aspects of the Problem of, general title of Part I, pp. 1–80; Mental Aspects of the Problem of, general title of Part II, pp. 81–144; Social Aspects of the Problem of, general title of Part III, pp. 145–208; Moral Aspects of the Problem of, general title of Part IV, pp. 209–272.
Happiness, its active and passive phases, p. 8; to seek it rationally is a duty, p. 8; diverges widely from mere sensual pleasure, p. 9; its pursuit not to be left to unguided instinct, p. 9; relation of good habits of sleeping to the ideal of happiness, p. 80; its substance for the most part made up of abstractions, p. 244; essentially a subjective state, p. 246.
"Happiness is no more than," etc., quotation from Marcus Aurelius, a chapter–heading introducing "The Will and the Way," p. 121.
"Happiness is not perfect till it is shared," Jane Porter, p. 212.
Happiness, the problem of, its universality, p. 5; chapter on, pp. 5–18; the problem summarized, pp. 16–17; the science of, outlined, p. 17.
"Happy is he that has well employed his time," quoted from Seneca, p. 165.
Health, of mind, dependent upon health of body, p. 44.
Heart, muscles of many suffer from over-exertion, p. 56.

INDEX

Heine, Heinrich (1797–1856), German poet, his comment on death, p. 269.
Henry IV of France (1553–1610), "Henry of Navarre," his comment on death, p. 266.
"He who has a taste for every sort of knowledge," etc., Plato's definition of a philosopher, p. 102.
Highways of life, the four, p. 9.
Historians, influence of certain modern historians upon one another, p. 154.
Historians of Greece, the three greatest, lived in the same period, p. 153.
History, the early, of all nations is vague because of the lack of written records, p. 106.
"Hitch your wagon to a star"—but not to an *ignis fatuus*, p. 144.
Hobby, choose one if one has not already chosen you, p. 196.
Honesty, undoubtedly the best business policy, but susceptible of some flexibility as to its interpretation in practical business life—more's the pity; avocational labors are somewhat removed from this danger, p. 206 *seq.;* in dealing with the child, is the *sine qua non*, but is not so recognized by most parents, p. 233 *seq.*
Hope and Nemesis, associated symbolically on an altar by the Greek sculptor Eunus, p. 135.
Horace (65–8 B.C.), Roman poet; quoted as to wealth and happiness, introducing chapter on "Gold versus Ideals," p. 183.
How to Sleep, chapter IV, p. 59 *seq.*
How to See and Remember, title of chapter V, p. 83 *seq.*
How to Think, title of chapter VI, p. 101 *seq.*
How to Work, title of chapter IX, p. 147 *seq.*
How to Invite Happiness, title of chapter XV, p. 241 *seq.*
How to Die, title of chapter XVI, p. 255 *seq.*
"Human happiness . . . seems to consist," etc.—Hume, p. 193.
Human nature, curiously uniform at base; we all like to feel that we have had all normal experiences, p. 221.
Hume, David (1711–1776), British historian and philosopher; quoted as to the content of happiness, chapter-heading to "Vocation versus Avocation," p. 193.
Hunger, not consistent with mental satisfaction, p. 21.
Hunter, Wm. (1718–1783), British physician and anatomist, on the pleasures of dying, p. 269.
Hutton, James (1726–1797), British geologist, sometimes called the father of modern geology. His studies revolutionized the views of geologists as to the great age of the earth; referred to as helping to prepare the way for Darwin, p. 105.
Huxley, Thomas H. (1825–1895), English biologist. Began life as a naval surgeon, subsequently teacher of biology at the School of Mines, etc., London; his definition of a properly equipped mind, p. 14; his defect of verbal memory, p. 87.

"I am rather disposed to say," etc.—Plato, p. 194.
Iconoclasm, the easiest road to notoriety, but often only a measure of narrowness of mind, pp. 116–17.
Ideas, revolutionary, are but a step removed from the humdrum ideas of common knowledge, p. 104; not necessarily good because they are new, p. 117.
"If you have so far mastered your appetite," etc.—Epictetus, p. 19.

Ill-health no barrier to successful productive effort, examples in evidence, p. 152.
Illusions, possible, should be subjected to common-sense tests, p. 142.
Indigestion, how fostered in America, p. 27.
Individual, the, versus the race, as regards the effects of suffering, p. 7.
Individual peculiarities as to number of hours of sleep required, p. 70.
Influence, mutual, of genius upon genius, illustrated by suggestive examples from various fields, pp. 153–4.
Inherited ideas, advice as to their close scrutiny, p. 117 *seq.*
Inhibition of action, a chief function of the will, p. 124.
Initial energy, the great need of the procrastinator, p. 149.
Innovations, of the would-be reformer, are usually found to be of antique origin, p. 143.
Insomnia, often the open door to insanity, p. 61; practical expedients for warding it off, p. 74 *seq.*
Instability of will-power, its penalties, with a familiar example, p. 127 *seq.*
Intellectual needs of different minds met by different books, p. 109.
"Intending" the mind, great discoveries made through persistent conscious effort in a given direction, examples of Newton, Harvey, Jenner, and Darwin, p. 112.
Interest, the basis of attention, which underlies and determines good memorizing, p. 89.
Interest and repetition, cited as the keys to memory-development, p. 98.
"In this case also the war is against two enemies," etc.—Plato, p. 184.
Intuitive knowledge, Beecher's seeming, explained, p. 103.
"Irresistible power of great wealth," etc., quotation from Epictetus as chapter-heading for "Self-Knowledge," p. 133.
Italian literature, its greatest monuments produced in a single epoch, p. 153.
"It is easy in the world to live," etc.—Emerson, p. 241.

Jenner, Edward (1749–1823), English physician, famous for his demonstration of the preventive power of vaccination, and hence one of the greatest of benefactors of humanity; his method explained, p. 106, p. 112.
Jortin, John (1698–1770), English church historian, characterization of the evils of suddenly acquired wealth, pp. 186–87.
Judgment, the all-importance of, as a prerequisite to the proper selection of materials for mental pabulum, and to success in practical life, p. 113 *seq.;* admonitions as to its practical cultivation, p. 114 *seq.;* differentiated from volition, p. 126.
Justice, Epicurus on, p. 10; the practice of, connotes all the virtues, p. 264 *seq.*

Kant, Immanuel (1724–1804), German philosopher; his systematic habits of arising cited, p. 131.
King Discontent, the great master-builder of civilization, p. 139.
Knowledge, seemingly intuitive, explained, p. 103; how to use that acquired from books, p. 111 *seq.*
Koran, the, learned by heart by the average Mohammedan, p. 94.

Lamarck, Jean B. (1744–1829), French biologist; the champion of evolution fifty years before Darwin, p. 105.

INDEX

Languages, the acquisition of, method of Heinrich Schliemann, p. 94 *seq*.
Law, the psychological, underlying the development of a good memory, pp. 88–9.
Lazy minds give themselves the excuse that pampering conditions are needed; the true worker learns to work any time and anywhere, p. 152.
Leibnitz, Gottfried (1646–1716), German philosopher, his expedient to aid the memory, p.85; his whimsical maxim regarding marriage, p. 218.
Library and gymnasium, no real rivalry between, p. 45.
Life, its main course, p. 8; the rational goal of, p. 9.
Life Companionship, title of chapter XIII, p. 211 *seq*.
Limitations, individual, of mind and body, must be recognized, p. 135.
"Live well with all the world," etc., reply of Aristippus when asked what philosophy had taught him, p. 102.
Living, the art of, its true doctrines, p. 17; is but a preparation for dying, p. 257.
Logical guesses versus intuitional knowledge, p. 104.
Lucian (ca. 120–ca. 200 A.D.), quoted as to the wealth of mind, p. 82.
"Luck," usually a misnomer as applied to human affairs: "unlucky," properly interpreted, usually means lacking in judgment, p. 114.
Lucretius (96–55 B. C.), Roman poet, disciple of Epicurus, and the most famous ancient expositor of his system, quoted as to the rules of true reason and a contented mind, p. 4; quoted to the effect that "one man's food is another's poison," chapter-heading for "Physical Needs," p. 20.
Lyell, Charles (1797–1875), English geologist, the great champion of uniformitarianism, referred to as helping to prepare the way for Darwin, p. 105.

Macaulay, Thomas Babington (1800–1859), English critic, historian, and statesman; his extraordinary memory, p. 85; despite his genius, he worked for weeks on a single review article, p. 155.
Machine, the bodily, should it be well or ill regulated? p. 38.
Mammon-worship, as viewed by Theognis, the Greek, p. 186.
Mammon, "no man is all his life a scoffer before the shrine of," p. 189.
Marcus Aurelius (121–180 A. D.), Roman emperor 161–180 A.D. often cited as almost the only example in history of Plato's ideal, the philosopher upon a throne; quoted as to the content of happiness, p. 3; happiness defined by, p. 121.
Marriage, why so permanent an institution, p. 214 *seq*.
Marriageable age, the, discussed, with comment on the restriction imposed by the slow development of human offspring, p. 213 *seq*.
Marriage-partner, the choice of, not to be left altogether to unguided instinct, p. 222 *seq*.
Martial (43–ca. 104 A.D.), Roman writer; quoted as to the double enjoyment of a well-lived life, p. 182.
Matrimony, versus a "career," with particular reference to ambitious youths of both sexes, p. 215 *seq.*; a premium put on by Augustus in imperial Rome, p. 217; should not be too long delayed, in the interest of mutual adaptation—a key to conjugal happiness, p. 218 *seq*.
Meat-eating, dangers of its excess, p. 24.

Melancholia, in certain forms of, the patient scarcely sleeps at all for weeks together, p. 73.

Memory, a tangible evidence of mental power, p. 85; the, of the average man contrasted with exceptional memories, p. 86; of the average individual greatly injured through the introduction of printing, p. 86; extraordinary, examples of, pp. 85, 86, 87; newspaper reading develops slip-shod reading and facile forgetting, pp. 87–8; possibilities of its development, p. 88; that of the average waiter is developed to its normal limits in one direction, pp. 88–89; how it may be cultivated, p. 90 *seq.;* possibilities of its development, p. 93 *seq.;* extraordinarily developed in cases of Sherwood the musician, Pillsbury the chess master, and Asa Gray the botanist, p. 93; of the average Brahman, p. 94; the extraordinary, of Heinrich Schliemann, p. 94 *seq.;* the memory of the adult versus that of the child, pp. 98–9.

Memory-development, as practised by Heinrich Schliemann, p. 94 *seq.;* closing admonitions as to, p. 99.

"Memory and oblivion," quotation from the Greek Anthology, p. 83.

Menage, Gilles (1613–1692), his curious reason for not reading Moreri's Dictionary, p. 86.

"Men err in their choice of good and evil," etc., quotation from Plato, p. 84.

Mental Aspect of the Problem of Happiness, general title of Part II, comprising these chapters: How to See and Remember, p. 83 *seq.;* How to Think, p. 101 *seq.;* The Will and the Way, p. 121 *seq.;* Self-Knowledge, p. 133 *seq.*

Mental action, in itself a source of profound pleasure, p. 251.

Mental athletics, importance of, p. 16.

Mental bias, admonitions as to emancipation from, p. 117 *seq.*

Mental development, tends to keep pace with physical development, p. 53.

Mental discipline, through retracing one's thoughts, and "intending" the mind, p. 112.

Mental languor, often induced by the habit of dozing at the end of the sleep period, p. 79.

Mental perspective, how explained, its importance, p. 166.

Mental vigor, how influenced by physical exercise, p. 51.

Mental vision, examples of defective, p. 92.

Mezzofanti, Guiseppe (1774–1849), Italian linguist; knew fifty-eight languages; a suggestion from his experience, p. 180.

Michelangelo and Leonardo were tireless workers; so were most other masters of the olden day, p. 155 *seq.*

Middle ages, dogmatic prudery of, as opposed to the right estimate of pleasure p. 12.

Milton, "the mute inglorious" deservedly forgotten, the voiceful, glorious Milton, known by his works, is remembered; justice of the verdict, p. 139.

Mind, the, should be "a cold, clear logic engine," p. 14; a marvellously accurate alarm-clock after good habits of sleeping are acquired, 77; of the child, opinionated as to school tasks, which it resents, to its disadvantage, p. 98; its seemingly intuitive acquisition of knowledge, p. 103; to become an efficient thinking-machine, must be properly fed, p. 106; its only direct function through which it can make itself manifest objectively is the stimulation of muscular contraction, p. 124;

some people assume an attitude of mind that repels happiness, cultivate yourself away from such an attitude. p. 246; the rudder of, otherwise the will, p. 123 *seq*.

Minds, the greatest like the least, are earth-born and earth-bound, p. 104.

Misery, as an incentive to work, Schliemann's opinion concerning, p. 95.

Mohammedan, the average, learns the Koran by heart, p. 94.

Montmorency, Anne de (1492–1567), French marshal, his dying rebuke to a Cordelier, p. 268.

Moral Aspect of the Problem of Happiness, General title of Part IV, comprising these chapters: Life Companionship, p. 211 *seq.;* The Coming Generation, p. 229 *seq.;* How to Invite Happiness, p. 241 *seq.;* How to Die, p. 255 *seq.*

Moral athletics, importance of, p. 16.

Morality, its association with healthful exercise of normal functions, p. 12.

Muscular system, need of giving specific attention to, p. 41; its development through use and atrophy through disuse, p. 41; its primary and secondary functions, p. 42; contraction of, accelerates the flow of blood, p. 42; contraction of, dependent upon nervous influence, p. 43; injury to, affects secondarily the entire organism, including the brain, p. 43; muscles of the chest and upper extremities suffer most from lack of exercise, p. 48; a simple method of development of, p. 51; dangers of its over-stimulation, p. 56.

Muscular development, symmetrical, its standards of measurement, p. 49; how best attained, p. 49 *seq.*

Musing, idle, an undesirable mental habit, p. 111.

Nitrogenous foods, caution as to their excessive use, especially for persons of sedentary habits, p. 24.

"No evil can happen," etc.—Socrates, p. 256.

Non dies sine linea, the rule of action that has produced the major part of the world's best literature, p. 132.

Normal mind, always has certain potentialities of genius, p. 163.

Now; the all-importance of the present, p. 150.

Obesity, one cause of its prevalence among Americans, p. 27.

Obstacles, the stimulus of, p. 7.

Old age, examples of men who achieved great things after passing its threshold, p. 172 *seq.*

Optimism versus pessimism, p. 261 *seq.*

Organic beings, unimportance of the average individual from the standpoint of world-progress, p. 139.

Organism, the, quick to acquire indolent habits, p. 79.

Out-door sports, golf, rowing, and riding are among the best, p. 53.

Pagan renderings of the Golden Rule; quotation from Seneca, p. 146; quotation from Aristotle, p. 210.

Pain, its purpose, p. 6; its cessation causes positive pleasure, p. 8.

Palate, pleasures of, p. 25 *seq.*

Palladas, apostrophy to gold, p. 188.

Parents, often instil the germs of superstition into the minds of their children, with permanent detriment, p. 234 *seq.*

Parenthood, a privilege, but not so regarded at first by most parents-to-be, p. 232.

Part II, Mental Aspects of the Problem of Happiness, p. 81 *seq.* comprising.

Past labors are pleasant, p. 163.

Pentathlon, the, of the Greeks, (running, jumping, discus-throwing, hurling the javelin, and wrestling), p. 54.

Perception, vivid, as the basis of good memory, p. 89.

Perceptive faculties, defectively developed in the ordinary individual, p. 91.

Peregrinos: "The wise man will not sin," etc., chapter heading for "How to Invite Happiness," p. 242.

Personal happiness, its seeking a duty, p. 8.

Personality, the well-rounded, is enviable, p. 12.

Pessimist, the, likely to be a disagreeable neighbor, p. 263.

Philosopher, the, as defined or characterized by Plato, p. 102.

Philosopher's stone, a modified, within the reach of every normal individual who will sedulously strive after it, p. 178 *seq.*

Philosophers of Greece, Plato the disciple of Socrates and Aristotle the disciple of Plato, p. 153.

Philosophical systems, all seek the goal of happiness, p. 12.

Philosophy, often misjudged by the world, p. 11; the mediæval, which deplored worldly pleasure, its persistent influence, p. 9; what it teaches, according to Aristippus, p. 102; of Herbert Spencer, characterized, p. 110.

Photography as a means of recreation, p. 203–4.

Physical health, persons desiring may well seek aid of the muscular system, p. 43.

Physical strength, of the race, as affected by gunpowder, p. 45.

Physical development, the degree of it desirable as an aid to health, p. 48; simplicity of its essential principles, p. 50; a practical means of, suggested, p. 50; the precursor of mental development, p. 53.

Physical Aspects of the Problem of Happiness, General title of Part I, comprising these chapters: The Problem of Happiness, p. 3 *seq.;* Physical Needs, p. 19 *seq.;* Sound Bodies, p. 39 *seq.;* How to Sleep, p. 59 *seq.*

Physical exercises and games will not serve the purposes of a hobby for all; p. 197.

Physical habits and their mental counterpart, p. 130 *seq.*

Physical needs, chapter on, p. 21 *seq.*

Pillsbury, Harry (1872–1906), American chess master, could play twenty blindfold games of chess while simultaneously playing duplicate whist, p. 93.

Plato (429–347 B.C.), Greek philosopher, quoted as to brutal or irrational pleasure, p. 20; quoted as to the training and education of children, p. 40; quoted as to the departments of education, p. 58; quoted concerning the body as a source of trouble and disquietude, p. 58; quoted to the effect that not much sleep is needed, p. 60; quoted as to the choice of good and evil, p. 84; quoted as to the relationship of wisdom, virtue, and "true and abiding pleasure," p. 120; quoted as to wealth and poverty, p. 184; quoted, a hedonistic doctrine, chapter-heading to Vocation versus Avocation, p. 194.

Pleasure, its direct and indirect pursuit, p. 5; its paths curiously devious, p. 6; in the contemplation of past achievement, p. 163; of the palate, p. 25 *seq.*

Pleasure-Seeker, the avowed, looked at askance, p. 10.

Pliny, the elder (23–79 A.D.),

Roman naturalist, his mode of work described by his nephew, Pliny the younger, p. 157.
Pliny, the younger (62–113 A.D.) his method of work, choosing the early morning hours, and composing in the dark, p. 151; quoted as to the rewards of virtue, p. 164.
Plodder, the mental, follows the same lines of progress as the man of genius, p. 104.
Plutarch, quoted as to the sentences inscribed upon the Delphic oracle, p. 134; quoted as to the measure of a man's life, p. 182.
Poe, Edgar Allan (1809–1849), American poet and story writer of the foremost rank, the text refers to his exposition of the manner and method of writing "The Raven," his most famous poem, p. 112.
Poets, influence of one upon another suggested by grouping into schools and appearance in great productive periods, pp. 153–4.
Poetry, its foundation in knowledge, even the most "inspired" imaginings are founded on wide reading and calm thinking, p. 112.
Porter, Jane (1776–1850), quoted, chapter-heading for "Life Companionship," p. 212.
Prejudice, founded on inheritance or the influences of environment, caution regarding its perverting influence, p. 117 *seq.*
Prisse Papyrus, the so-called oldest book in the world; its paradoxical plaint about the degeneration from the good old times, p. 143.
Problem, the, of happiness, chapter on, pp. 5–18.
Procrastination, the vice of contemplative minds, p. 149.
Psychological law, the, underlying the development of a good memory, pp. 88–9.
Punching-bag, a fair substitute for a sparring-partner, p. 54.
Pythagoras, the "Golden Words" of, quoted as to the care for the health of the body, chapter-heading for "Sound Bodies," p. 39.

Queen Victoria, of England (1819–1901), began the study of Hindustani at eighty, p. 98.
Quotations used as suggestive headings or texts:
  Part I, quotation from Plato, p. 2;
  Part II, quotation from Lucian, p. 82;
  Part III, quotation from Seneca, p. 146;
  Part IV, quotations from Plato and Diogenes Laertius, p. 210.
Quotations used as chapter-headings:
  Chapt. I, Marcus Aurelius, p. 3, Lucretius, p. 4;
  Chapt. II, Epictetus, p. 19, Plato and Lucretius p. 20;
  Chapt. III, Pythagoras, p. 39, Plato, p. 40, Plato and Socrates (in Plato's *Phædo*), p. 58;
  Chapt. IV, Pythagoras, p. 59, Plato, p. 60;
  Chapt. V, The Greek Anthology, p. 83, Plato, p. 84, Socrates (in Plato's *Phædo*), p. 100;
  Chapter VI, William Forbes, p. 101; Aristippus and Plato, p. 102, Plato, p 120;
  Chapt. VII, Marcus Aurelius, p. 121, Emerson, p. 122;
  Chapter VIII, Epictetus, p. 133, Plutarch, p. 134;
  Chapt. IX, Colton, p. 147, Emerson, p. 148, Pliny the younger, p. 164;
  Chapt. X, Seneca, p. 165, Francis Bacon, p. 166, Plutarch and Martial, p. 182;
  Chapt. XI, Horace, p. 183, Emerson and Plato, p. 184;

Chapt. XII David Hume, p. 193, Plato, p. 194;
Chapt XIII, John Boyle, p. 211, Jane Porter, p. 212;
Chapt. XIV, Bulwer Lytton, p. 229, Emerson, p. 230;
Chapt. XV, Emerson, p. 241; Peregrinos, p. 242;
Chapt. XVI, Epictetus, p. 255, Socrates and Plato, p. 256.

"Read more and write less," etc., saying of Wm. Forbes, p. 101.
Reading, the art of, its vast and all-compassing importance as an aid to thinking, p. 106 *seq.*
Records, written, are essential to accurate history, history proper does not antedate the origin of the art of writing, p. 107.
Recreation, out-of-door, may lead to an interest in Nature-studies, p. 200.
Reforms, valid and visionary, admonishment not to mistake the mango-tree of a conjurer for an actuality, p. 142.
Regret for past mistakes, the futility of, learn from your mistakes, but waste no time crying over spilled milk, pp. 149–50.
Regularity of sleeping a prime essential, p. 71.
Repetition, as an aid to memorizing, p. 97.
Repetition and Interest, cited as the keys to memory-development, p. 98.
Resolutions, futility of, if not supported by stable will-power, p. 127.
Responsibilities of parenthood, not all marriageable persons are fitted for, p. 231.
Revolutionizing ideas are but a step in advance of ideas that fail to revolutionize, p. 104.
Rheumatic disorders, free drinking of water a useful remedy for, p. 30.
Right living, the individual application of its rules is the desideratum, p. 18.
Rig-Veda, the 10,000 verses of, are committed to memory by the average Brahman, p. 94.
Roman literature, great figures grouped into two periods, p. 153.
Romantic love versus reason, as applied to the choice of a marriage-partner, p. 224 *seq.*
Rudder of the mind, the, the will defined as having a rudder-like function, p. 123.

Satiety, said by Theognis to kill more than famine, p. 26.
Schliemann, Heinrich (1822–1890), German man of business and archæologist, his own account of his feats of memory-development, p. 94 *seq.;* took up the study of Greek when thirty-five, p. 98.
Schooling, its chief ultimate purpose is to develop stability of volition rather than to give specific knowledge, p. 129.
School-room tests of capacity, not necessarily final in their verdict as to capacity of any individual to succeed in the life-tasks, p. 137.
Schools, the teaching of the physiology of breathing, and its probable benefit, p. 32; of workers, sundry examples of, suggesting the influence of example, pp. 153–4.
Science, applied to the pursuit of happiness, p. 9.
Scientific training, its true value lies in the development of logical methods of thinking, rather than in the acquisition of specific knowledge, p. 115.
"Second nature" of fixed habits of action that at first were difficult, p. 162.
Selection, the, of materials presented to the mind, the need of right selection as an aid to the acquisition of good habits and enlarged capacities of thinking, p. 113.

INDEX

Self-analysis, habitual, a vicious habit, to be avoided, p. 140.

Self-confidence, one of the great keys to success, p. 141.

Self-culture, anecdotal illustrations of its possibilities, p. 159 *seq.*

Self-education, its goal and method, p. 130.

Self-knowledge, title of chapter VIII, p. 133 *seq.;* its desirability and the method of attaining it, p. 136 *seq.*

Seneca, Roman statesman and author, quoted as to the proper relations of superior and inferior—a Pagan rendering of the Golden Rule, p. 146; quoted as to the employment of time, to introduce chapter X, "Youth versus Age," p. 165; on the paraphernalia of the death-bed, p. 269.

Sensitive minds, their seemingly intuitive asquisition of knowledge, p. 103.

Sleep, mental process during, not entirely in abeyance, p. 13.

Sleep, seemingly negative in character, yet susceptible of being improperly indulged, with serious results, p. 61; how much is required by the normal individual? Franklin's answer to the question, p. 62; individual difference as to the number of hours required, p. 62; slovenly habits of sleeping are common, p. 63; most profound about two hours after losing consciousness, pp. 63–4; mistaken notion that it is deepest just before waking, p. 64; explained as the time for repair of brain tissues, p. 65; the dream-state, p. 66; sounds that recur at regular intervals cease to disturb the sound sleeper, p. 69; how the sleep of the adult may be made to approximate that of normal boyhood, p. 69; suggestions for the acquisition of good habits of sleeping, p. 70 *seq.;* advisability of securing enough sleep at all hazards, p. 70; time for, no longer fixed by the normal hours of a diurnal animal, thanks to artificial light, p. 71; regular hours for, are more important than the exact location of the hours, p. 71; desirability of acquiring the habit of retiring at a fixed and unvarying hour, p. 72; expedients for banishing consciousness on retiring, p. 73 *seq.;* physical expedient calculated to ward off insomnia, p. 74; normal sleepers awaken spontaneously at a fixed hour, determined by habit, p. 77; the test of sufficient, is to awaken refreshed, p. 78; dozing in the morning is disadvantageous, but a brief mid-day nap may be useful, p. 80; likened to death, p. 269 *seq.*

Slovenly thinking, penalties of, p. 15.

Smith, William (1769–1839), English paleontologist, the first to demonstrate the successions of population of the geological strata, referred to as helping to prepare the way for Darwin, p. 105.

Smokers of tobacco, mostly prefer that their sons should abstain, p. 36.

"So live with your inferior," etc., quotation from Seneca, to introduce Part III, Social Aspects of the Problem of Happiness, p. 146.

Social Aspects of the Problem of Happiness, general title of Part III, comprising these chapters: How to Work, p. 147 *seq.;* Youth versus Age, p. 165 *seq.;* Gold versus Ideals, p. 183 *seq.;* Vocation versus Avocation, p. 193 *seq.*

Socrates (c. 470–399 B.C.), Greek philosopher; quoted (as cited by Plato in the *Phædo*), as to the singular relationship of

pleasure and pain, p. 2; quoted (from Plato's *Phædo*), on the body as a source of trouble, p. 58; (in Plato's *Phædo*), quoted as to the value of wisdom, p. 100.
Socrates and Plato, quoted about death, chapter-heading to "How to Die," p. 256.
Solacers of appetite, tea, coffee, alcoholic beverages, and tobacco, p. 33 *seq.*
Sound bodies, advice of Pythagoras concerning, p. 39; title of chapter III, p. 39 *seq.*
Spencer, Herbert (1820–1903), British philosopher, whose writings began to expound a doctrine of evolution before the publication of Darwin's "Origin of Species;" comment on his alleged avoidance of reading, p. 110–11.
Sports, physical, healthy boy takes to them naturally, p. 47; competitive, their value in stimulating physical development, p. 52; athletic, notwithstanding their benefits, may become vicious if pursued too persistently, p. 56.
Stability of will, an example of its value, p. 127–8.
Stanton, Elizabeth Cady (1815–1902), American lecturer, began study of music at seventy, p. 98.
Stephenson, Robert Louis (–), British man of letters, cited as having achieved success through infinite toil, p. 155.
Stomach, normal person should have an empty stomach on retiring, p. 76.
Stone, Edmund, British mathematician, anecdote concerning, to show the possibilities of self-culture, p. 160.
Struggle for existence, less and less a physical struggle, p. 46; more difficult but also more fascinating in the centres of population, p. 138.
Success, largely dependent upon stability of will-power, p. 123; attained in one direction usually implies capacity to succeed in other directions as well, p. 137; if it fails to come before middle age, may it be attained later? 167 *seq.*
Successful men, the value of their example, if properly interpreted, p. 114; often make mistakes, but recover from them quickly, and learn from experience, p. 142.
Suffering, its universality, p. 6.
Superstition, how instilled into the minds of children, unwittingly, by parents, p. 234 *seq.*
Sympathetic books compared to human companions, p. 109.
Synthetic mind, the, its capacity to reason, p. 104.

Tea and Coffee, more harmful than often supposed, pp. 35–36; non-use of by athletes in training, p. 37.
Thackeray, Wm. M. (1811–1863) English novelist and humorist, his habit of precise thinking, p. 14.
Thales, one of the earliest of Greek philosophers, the maxim "know thyself," here ascribed to Thales, has been ascribed also to sundry other of the wise men of antiquity; the maxim elucidated, p. 136.
"The care to live well," etc.—Epictetus, p. 255.
The Coming Generation, title of chapter XIV, p. 229 *seq.*
"The exchange of one fear," etc., quotation from Socrates, p. 100.
"The good man prolongs his life," etc.—Martial, p. 182.
"The man of understanding," etc., quotation from Plato, p. 20.
"The manly part," etc., quotation from Emerson, used as a chapter-heading for "How to Work," p. 148.

INDEX

"The measure of a man's life," etc., quotation from Plutarch, p. 182.

The Problem of Happiness and its Physical Aspects, see Physical Aspects of the Problem of Happiness.

"The wealth of mind," etc., quotation from Lucian, p. 82.

The Will and the Way, title of chapter VII, p. 121 *seq.*

"The wise man will not sin," etc., quotation from Peregrinos, p. 243.

Theognis (6th Century B.C.), Greek philosopher, quoted to the effect that satiety kills more than famine, p. 26.

Theophrastus, lamented at 107 years that he must die, p. 267.

"There is a great difference between one who is learned and one who is not," etc.—Plato, p. 40.

"There are two sentences inscribed upon the Delphic oracle," etc., quotation from Plutarch, as chapter-heading for "Self-knowledge," p. 134.

"There is a child within us to whom death," etc.—Plato, p. 256.

"There is good reason to hope that death is a good"—Socrates, p. 256.

"There is no thought in any mind, etc., quotation from Emerson, to introduce "The Will and the Way," p. 122.

"There is one way of attaining," etc.—Bulwer Lytton, p. 229.

Thinking, during sleep, probably continues, modified only in degree, p. 13; creative, is man's sublimest privilege, p. 119.

Thoreau, Henry D. (1817–1862), American nature-lover, writer, and philosopher, his cynical comment on human stupidity, p. 15; quoted to the effect that most reformers clip at the twigs of the tree of evil instead of striking at the root, p. 142.

"Those who know not wisdom and virtue," etc., quotation from Plato, supplementing chapter on "How to Think," p. 120.

Threshold of senility, not definitely fixed, but begins to be approached in the fifth decade, the man who has passed it may still be an important producer, p. 170 *seq.*

"Thrice happy," according to Emerson, is the man born with a bias toward useful pursuits, p. 130.

"To be rich," etc.—Emerson, p. 184.

Tobacco, a contribution of the western hemisphere, p. 33; most of its habitues are practically its slaves, p. 36; a practical suggestion regarding its use, p. 37; its non-use by athletes in training, p. 37.

Tragedians of Greece, the three greatest, lived in the same epoch, p. 153.

Truth, the realm of, not a barren land, but a land of natural miracles, p. 235.

Tubercle bacilli, danger from, accentuated by improper breathing, p. 13.

Turnebus, Adrian (1512–1565), French critic, his tireless industry, p. 156.

Turnvereins, motto of, "A sound mind in a sound body," a valid one, p. 44.

Vaccination, Jenner's method in demonstrating its preventive power explicated, pp. 106, 112.

Vanity over personal traits of body or mind, its illogicality, p. 260.

Ventilation, usually not considered by builders or purchasers of private dwellings, p. 30; inefficient, may disturb sleep and cause dreams, p. 67.

Verbal memory, examples of extraordinary, pp. 85, 86; Huxley's defective, p. 87.

Versatility of effort, its dangers for the receptive mind, p. 126.

Virtue, all true virtue the companion of wisdom, according to Socrates, p. 100; connote with living agreeably according to Epicurus, p. 11.

Vision, blurred, and the attendant habit of defective memorizing, p. 99.

Visionary ideas, how held in check by judgment, supported by knowledge, p. 116.

Vocation versus Avocation, title of chapter XII, p. 193 *seq.*

Volition or will, the master faculty, p. 123 *seq.;* differentiated from judgment, p. 126.

Waiter, an ordinary, gives illustration of memory-training carried to normal limits in one direction, p. 88–9.

Water, as a food, p. 29; its too abstemious use, p. 30.

Webster, Daniel (1782–1852), American statesman, quick eye and receptive brain of, p. 91.

When to work, the question considered from various standpoints, p. 150 *seq.*

"Whenever we step out of domestic life," etc.—John Boyle, p. 211.

Wild animals seldom die of disease in a state of nature, p. 47.

Will, the all-importance of, p. 123; the inhibitory functions of, p. 124.

Will-o'-the-wisp, not a useful guiding-star, scrutiny of one's ideals enjoined, to guard against illusion, p. 143.

Wine, its use by the Greeks, p. 11; illusive belief in its benefit, p. 35.

Wisdom, its value, according to Socrates, p. 100.

Women, attire of, as influencing breathing, p. 31.

Worriment, as a sleep-banisher, p. 77.

Wrestling, one of the best gymnasium sports, pp. 53–54; held in high esteem among the Greeks, p. 54.

Writing, the art of, as a prerequisite to advanced civilization, p. 106.

"You cannot properly call a man happy," etc.—Horace, p. 183.

Youth versus Age, title of chapter X, p. 165 *seq.*

Youthful vigor, may be retained far past middle life, suggestions as to the attainment of this end, p. 177 *seq.*

226

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

P&A Sci